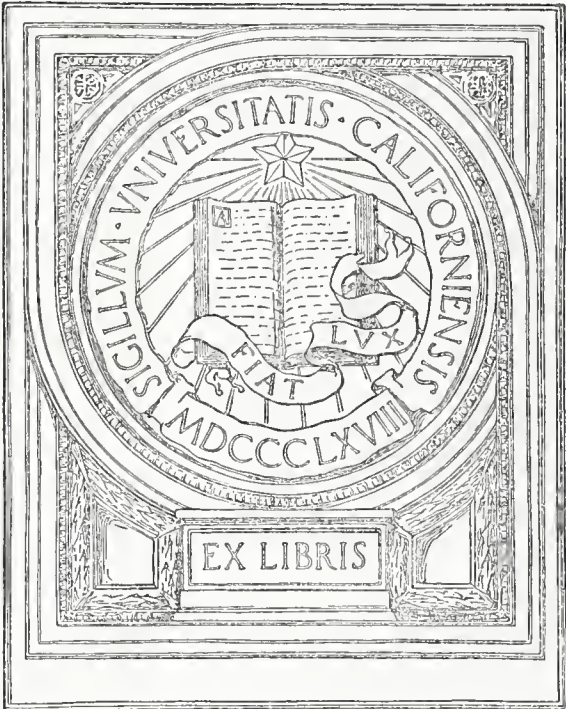
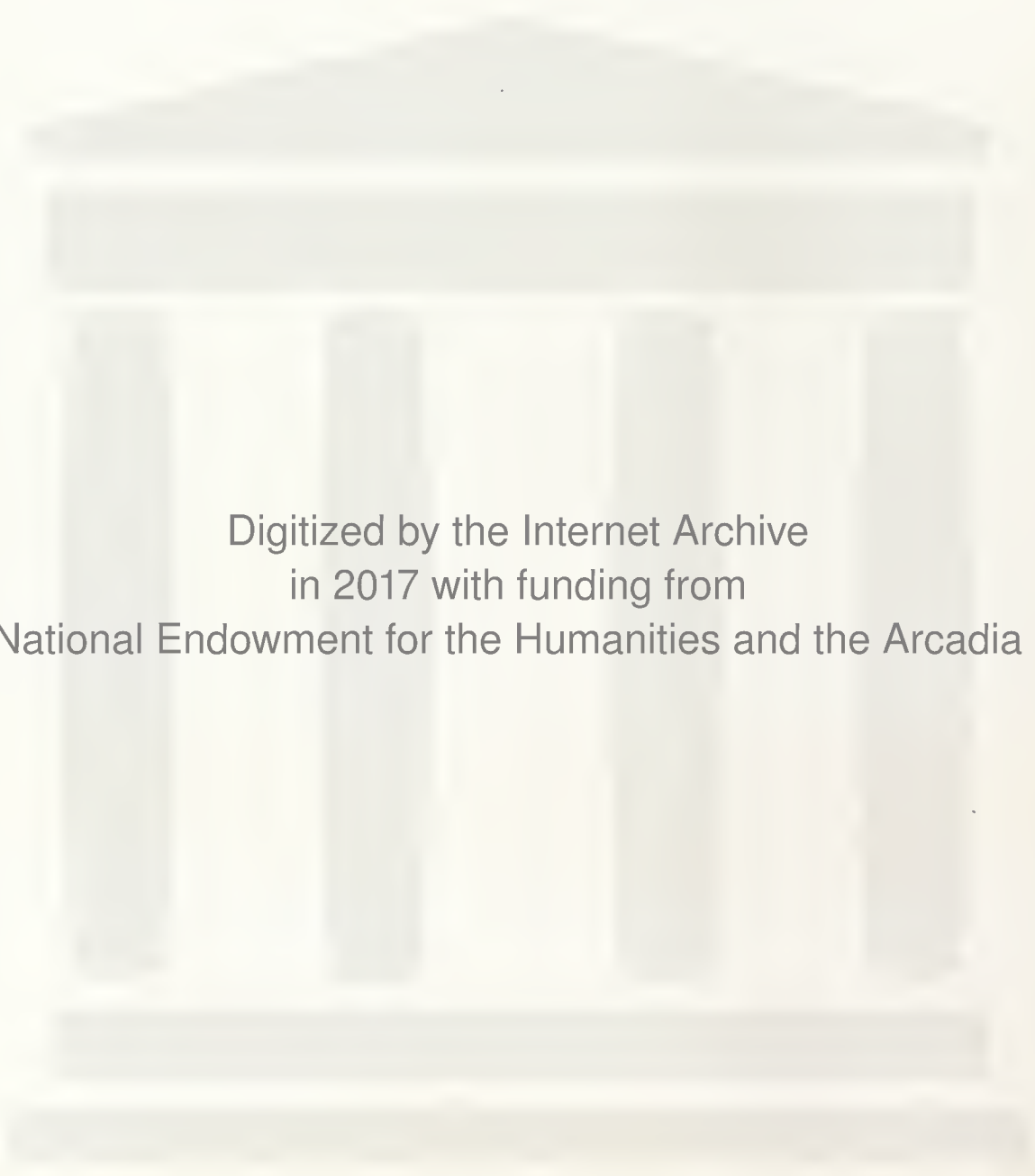


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THE JUNE 1956
JOURNAL
OF THE
ARKANSAS MEDICAL
SOCIETY

VOL. LIII No. 1

FORT SMITH, ARKANSAS

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FOUNT RICHARDSON

FAYETTEVILLE

President

Arkansas Medical Society

1956 - 1957

The JOURNAL

OF THE ARKANSAS MEDICAL SOCIETY

PUBLISHED MONTHLY UNDER DIRECTION OF THE COUNCIL

Vol. LIII

JUNE, 1956

No. 1

80th Annual Session

Arkansas Medical Society

PRESIDENT'S ADDRESS*

FIRST GENERAL SESSION

L. H. McDANIEL, Tyroneza

The Doctor and His Medical Society

I salute, as I have in each of my addresses lately, the full time professor as the cornerstone and foundation of our medical education. Without his unselfish service the moulding of our young physicians today would constitute not only a problem but a hazard.

As my beloved and lamented friend, Steve Kenyon, whose going left such a void in our circle, said in his chairman's address to the Section of General Practice of the Southern Medical Association several years ago: "It is my sincere belief that every holder of the degree of Doctor of Medicine should esteem it a privilege to affiliate with organized medicine in all its phases, from the County Medical Society, State, Southern, AAGP, if he is a general practitioner, or his specialty group, if he specializes, and finally to membership in the American Medical Association." There is only one item that I want to view with alarm as far as the young physician is concerned and that is his all-too-frequent absence from the Medical Society meetings. Remember the dollar you made while skipping the Medical Society meeting costs you ten down the road. Call that the "McDaniel Rule of Medical Economics" if you please.

It is at the various Medical Society meetings that we learn to appreciate the sincerity of medicine; it is there that we are stimulated to greater effort by the unselfish and enthusiastic zeal for more knowledge on the part of the average doctor, and it is there that we absorb newer prac-

tices, methods and technics. It is in the scientific sessions that we admit our ignorance and scientific shortcomings and resolve to work harder and study more.

It is at the Medical Society meeting that we learn that our brother physician—or if you must call him your competitor—is a pretty good fellow after all—just the same as you—doing the best he can under the circumstances, and that little mean jealous desire to tear down for him what he has been building up for years, is softened—then overcome. Yes, the County Medical Society offers the solution for many medical problems before they are allowed to go on to suppuration.

There are those today who would destroy organized medicine and make its members serfs of our own government. They accuse the American Medical Association of being a trust and a monopoly. Yet, we who are familiar with organized medicine know that all medical laws, both State and Federal, designed for the protection of the public against ignorance, charlatans, quacks and crooks originated in the committee rooms of our various medical societies and medical associations. Our public health laws, our medical practice acts, our narcotic regulations, our pure food and drug acts, and our hospital and medical school standards, are examples of the work and study of medical men as a part of their unselfish service. From day to day these standards need to be revised and raised to meet the changing times and needs. It is your and my responsibility to our people to see that they are kept on the same high plane as they have been in the past.

*Read before the 80th Annual Session, Arkansas Medical Society, Little Rock, April 23, 1956.

Organized medicine is the liaison officer, so to speak, between the individual doctor and the public. It is through our various public relations officers and committees that the public can be informed and educated as to our desires and efforts to furnish them the highest type of medical service at the lowest possible cost, which to me is another very important reason for belonging to organized medicine.

The cost of attending medical meetings in time, work and money is high to some; yet to me, the social contacts with the fine men of medicine have doubly repaid me for all such expenses. The friendship, the love and affection of my fellow doctors are among the most treasured possessions of my life.

When we study the lives of the great men of medicine, we find that among their outstanding traits of character was their unerring custom of living ethically with our fellow doctors. Much of the abuse of doctors and many of the lawsuits against them were originated by the vicious criticisms, or insidious slurs of some other doctors. Remember, my friends, when in the practice of medicine, that when you slur the other man you are hurting yourself worse than him. No one can fool all the people all the time, so if he is a heel the world will find out without your telling. Ethics

of medicine is simply the Golden Rule of medicine; and it is one code that we should never betray. If we cannot speak in complimentary terms of our brothers in medicine, then we should hold our tongues. Some call it tolerance, but Paul in writing to the Corinthians called it charity. How truly he wrote when he said:

"Though I speak with the tongues of men and of angels, and have not charity, I am become as sounding brass or tinkling cymbal."

There are so many ways to be unethical, which your County Society and mine is constantly trying to cure. The tone of the voice, the shrug of the shoulder, the casting of reflections before the patient, the mean and meddlesome trick of having your brother physician's embarrassing moments brought up. The asking "why" of your competitor's treatment. Surely he has a "why" of his treatments and his "why" might be the correct answer or the proper treatment. Then how well do I remember an elderly physician's attitude toward me after I had had several years experience. Whenever he was told that I was having a certain measure of success in a given case, his comment was always the same—yes, Dr. McDaniel is going to be a good doctor whenever he has had a few more years experience. When the old gentleman went to his final reward recently he was still telling



President Fount Richardson receives the oath of office from L. H. McDaniel.

the folks I needed a few more years experience. Maybe the old gentleman was correct.

Your county society and mine glorifies cooperation and comradeship and bitterly criticizes jealousy and backbiting. Will you permit me to pay my respects, or I should more properly say my curses on one trait to avoid and that trait is jealousy. My friends, do not let ambition be tarnished with jealousy for ambition is wholesome, worthy, inspiring—but be careful that your ambition which is laudable does not fly off at a tangent into the realm of jealousy. Jealousy grows out of a recognition of inferiority. No man is ever jealous of his rival as long as he thinks he has the superiority. No woman is jealous unless she thinks her rival may have an appeal that she doesn't have. The Mayos, Oslers, Laheys, Criles were not jealous of quacks, fakes and humbugs. Jealousy is a sense of cowardice. It is true in the ministry, in law, in medicine or what have you. When you are jealous of your brother physician you are acknowledging to the world—yes, you are shouting it from the housetops—that he has something you don't have. Don't castigate your more successful colleague but emulate his good qualities.

Prayer of a Sportsman

Dear Lord, in the battle that goes on through life
 I ask but a field that is fair,
 A chance that is equal with all in the strife,
 A courage to strive and to dare;
 And if I should win, let it be by the code
 With my faith and my honor held high;
 And if I should lose, let me stand by the road,
 And cheer as the winners go by.
 And Lord, may my shouts be ungrudging and clear,
 A tribute that comes from the heart,
 And let me cherish a snarl or a sneer
 Or play any sniveling part;
 Let me say, "There they ride, on whom laurel's bestowed
 Since they played the game better than I."
 Let me stand with a smile by the side of the road,
 And cheer as the winners go by.
 So grant me to conquer, if conquer I can,
 By proving my worth in the fray,
 But teach me to lose like a regular man,
 And not like a craven, I pray;
 Let me take off my hat to the warriors who strode
 To victory splendid and high.
 Yes, teach me to stand by the side of the road
 And cheer as the winners go by.

Finally, what is a physician? Just what does he mean? What does he signify? What does he typify? This man of medicine means something to you and to me, to our families and our patients. When no voice of distress reaches his ears in vain and no hand seeks his aid without response; when he knows how to sympathize with men in their sorrows, yea, even in their sins—knowing that each man fights a hard fight against many odds; when he finds good in every faith that helps any man to lay hold on higher things; and to see majestic meanings in life whatever the name that that faith may be—and may I assure you that every faith is represented here today in our Arkansas Medical Society. When he has learned how to make friends and to keep them, and above all how to keep friends with himself. When he loves flowers, picks the underdog in every struggle, can pick out and enjoys birds without a gun, and feels the thrill of an old forgotten joy when he hears the laugh of a little child. When he can be happy and high minded amid the meaner drudgeries of life and be thankful to his Creator for sunshine, showers, life and love and above all the opportunity to serve God's creatures. When he can look into a wayside puddle and see something besides mud and into the face of the most forlorn mortal and see something beyond sin. When he knows how to pray, how to love, how to hope, how to serve. When he has kept faith with himself, with his fellowman, with his God; in his hand a sword for evil, in his heart a bit of a song—glad to live but not afraid to die! In such a doctor, whether he be rich or poor, scholarly or unlearned, famous or obscure, the Golden Rule of applied Christianity—and please note the word applied—has wrought its sweet ministry. Again I say that any noble life of medicine means something to you and to me. Yes, the every day physician who goes to see sick patients at night, the surgeon who gets up from a bed of rest to remove an offending appendix or the obstetrician who waits and waits to usher a new human being across the threshold of life—each one is a disciple of "The Great Physician."

My friends, the poem "Let Me Live in a House by the Side of the Road" is so beautiful but so negative. May I not repeat the author Gresham's answer that more correctly typifies that great soul of medicine we try to honor today entitled "Let Me Walk with the Man in the Road":

'Tis only a half truth the poet has sung
 Of the "House by the Side of the Way";
 Our Master had neither a house nor a home,
 But he walked with the crowd day by day.

And I think, when I read of the poet's desire
That a house by the road would be good;
But service is found in the tenderest form
When we walk with the crowd in the road.
So I say, let me walk with the men in the road,
Let me seek out the burdens that crush;
Let me speak a kind word of good cheer to the weak
Who are falling behind in the rush.
There are wounds to be healed, there are breaks we must mend,
There's a cup of cold water to give;
And the man in the road by the side of his friend
Is the man who has learned to live.
Then tell me no more of the house by the road,
There is only one place I can live.
It's there with the men who are toiling along,
Who are needing the cheer I can give.
It is pleasant to live in the house by the way
And be a friend, as the poet has said,

But the Master is bidding us, "Bear ye their load,
For the rest waiteth yonder ahead."
I could not remain in the house by the road
And watch as the toilers go on;
Their faces be clouded with pain and with sin,
So burdened, their strength nearly gone.
I'll go to their side, I'll speak in good cheer,
I'll help them carry their load;
And I'll smile at the man in the house by the way,
As I walk with the crowd in the road.
Out there in the road that goes by the house,
Where the poet is singing his song;
I'll work and I'll walk midst the heat of the day,
And I'll help falling brothers along.
Too busy to live in the house by the way,
Too happy for such an abode;
And my heart sings its praise to the Master of all,
Who helps the doctor to serve in the road.

Arkansas Medical Society Officers for 1956-1957



Seated, front row (left to right): Elvin Shuffield, Ross Fowler, Louis K. Hundley, James M. Kolb, Hugh R. Edwards, T. Duel Brown, Perry Dalton, R. B. Robins; second row (left to right), Fount Richardson, John William Smith, L. A. Whitaker, Randolph Ellis, Henry Hearnberger, H. W. Thomas; third row (left to right), L. H. McDaniel, Joe Shuffield, W. R. Brooksher, Fay Jones (Past Presidents), Joe Norton, John P. Wood. Standing: Euclid Smith (Past President) and Joe Verser.

PROCEEDINGS

EIGHTIETH ANNUAL SESSION ARKANSAS MEDICAL SOCIETY Robinson Auditorium, Little Rock April 23rd, 24th, and 25th, 1956

FIRST GENERAL SESSION

Monday, April 23rd

Lecture Hall, Robinson Auditorium

With John D. Olson presiding, the meeting was called to order at 9:00 a. m. The Reverend Richard B. Hardie, Westover Hills Presbyterian Church, Little Rock, gave the invocation.

President L. H. McDaniel addressed the Society as reported on page 1. The Director of the Department of Public Relations, American Medical Association, Mr. Leo E. Brown of Chicago, addressed the Assembly.

R. L. Sanders, Memphis, immediate past president, Southern Medical Association, spoke to the Society.

The scientific session proceeded as follows:

Julian Ruffin, Duke University, Durham, North Carolina, "Peptic Ulcer."

Robert Huseby, University of Colorado, "Palliative Medical Therapy of Carcinoma of the Breast."

John W. Hope, Children's Hospital, Philadelphia, "The Normal Chest of Infants and Children—Facts and Fallacies."

Robert A. Davison, University of Tennessee College of Medicine, Memphis, "Teaching General Practice in the Medical School."

Monday Afternoon, April 23rd

SECTION ON INTERNAL MEDICINE

The Section on Internal Medicine held a luncheon in the Banquet Hall, Hotel Marion, with Wilburn M. Hamilton presiding. Following the luncheon, a symposium on Gastrointestinal Bleeding was held; participants: Julian Ruffin, Duke University, Durham; Joseph G. Calhoun, Little Rock; Grimsley Graham, Little Rock; Peter O. Thomas, Little Rock; and Joe H. Hardin, Little Rock. Jerome S. Levy presided.

SECTION ON RADIOLOGY

The Section on Radiology held a luncheon in the Coach Room, Marion Hotel, with George

Burton presiding. The section's business session was held in conjunction with luncheon. At 2:00 p. m. the Radiological program proceeded as follows:

John W. Hope, Philadelphia, "The Acute Abdomen in Infancy."

William Snow, Shreveport, "The Role of the Bronchial Tree in Lung Disease."

Marvin Keirns, Memphis, "Peripheral Arteriography."

David M. Gould, Little Rock, "Roentgen Findings of Disseminated Lupus Erythematosus."

ARKANSAS ACADEMY OF GENERAL PRACTICE

The Arkansas Academy of General Practice held a symposium on the relationship between general practitioners and specialists in the Lecture Hall of the Robinson Auditorium. Ben N. Saltzman of Mountain Home presided, with Robert A. Davison of Memphis, Mr. Leo E. Brown of Chicago, John McC. Smith of Little Rock, John Greutter of Little Rock, A. R. Sparks of Little Rock, and F. R. Buchanan of Little Rock participating.

FIRST SESSION HOUSE OF DELEGATES

Monday Afternoon, April 23rd

Lecture Hall, Robinson Auditorium

Speaker T. Duel Brown called the meeting to order at 4:00 p. m. Secretary Monfort called the roll of Delegates.

The Chairman of the Credentials Committee, James M. Kolb, reported that credentials of the Delegates present had been examined and found correct and that a quorum was present.

The following Delegates and members seated as Delegates by action of the House were present:

ARKANSAS, E. A. McCracken; ASHLEY, M. C. Crandall; BAXTER, H. K. Baldridge; BOONE, Henry Kirby; BRADLEY, George Wynne; CHICOT, A. G. Talbot; CLARK, P. R. Anderson; CONWAY, H. E. Mobley; CRAIGHEAD-POIN-

SETT, R. C. Hooper, Joe Verser; CRAWFORD, G. K. Patton; CRITTENDEN, T. S. Hare; CROSS-ST. FRANCIS, A. F. Barr; DESHA, H. T. Smith; DREW, Van C. Binns; GARLAND, James Leatherman, Thomas Durham, H. King Wade; GRANT, Miles F. Kelly; HOT SPRING, Randolph Ellis; INDEPENDENCE, Charles A. Taylor; JEFFERSON, Charles W. Reid; JOHNSON, W. R. Scarborough; LAFAYETTE, R. H. Harrison; LINCOLN, Charles W. Dixon; LITTLE RIVER, N. W. Peacock, Jr.; MILLER, Harry Murry; MISSISSIPPI, Eldon Fairley; MONROE, Ed McKnight; OUACHITA, James W. Hawley; PHILLIPS, Reuben L. Chrestman; POLK, L. K. Williams; PULASKI, M. J. Kilbury, Jr., John McCollough Smith, Alfred Kahn, Edgar Easley, G. W. S. Ish, William S. Orr, Gordon P. Oates, Robert D. Jones, James W. Headstream, Ellery C. Gay; RANDOLPH, W. E. Hamil; SEBASTIAN, L. A. Whittaker, A. S. Koenig, J. P. Shermer; UNION, D. E. White, George Burton; WASHINGTON, Ruth Lesh, Max McAllister; WHITE, N. C. David, Jr.; WOODRUFF, Fred C. Inman.

The following Councilors were present as members of the House of Delegates:

Second District, Hugh R. Edwards; Fourth District, Louis K. Hundley; Fifth District, Perry Dalton; Eighth District, Elvin Shuffield, and Tenth District, James M. Kolb.

Speaker Brown introduced Mrs. Mason G. Lawson, Little Rock, President of the Woman's Auxiliary to the American Medical Association, who addressed the House as follows:

"Mr. Speaker, Members of the House of Delegates and Guests: It is indeed an honor to have the privilege of speaking to you today and I welcome the opportunity to express my sincere appreciation to you and the members of the Arkansas Medical Society for the many courtesies which you have extended to me throughout the years. Your interest, support and your never failing loyalty have made it possible for me to assume the duties of the office of President of the Woman's Auxiliary to the American Medical Association. It has also made the position meaningful to me in that it brings recognition to the Woman's Auxiliary to the Arkansas Medical Society.

"Throughout this year of almost constant travel it has become more apparent to me that our State Auxiliary is one of the very finest and I take great pride in its accomplishments. Our only reason for existing as an organization is to extend, in every way possible, the aims of the medical profession and the Arkansas Auxiliary has completely justified your confidence.

"The National Auxiliary has had a very successful year and we have become recognized throughout the country as a powerful force in the field of health education. Our program and projects are all designed for the benefit of our local communities and no part of our activity has been planned for the financial benefit of any physician or any physician's wife.

"One of our major interests has been medical education—last year county and state auxiliaries joined with the National Auxiliary and contributed \$80,539.65 to the American Medical Education Foundation through our own Auxiliary Fund. This year we have every hope that our gift will exceed \$100,000.00. Today at the Auxiliary luncheon a check in excess of \$1,500.00 was presented to me as the Arkansas Auxiliary's contribution to AMEF. This made me both proud and happy because the amount far exceeded the \$214.00 which was last year's contribution. Of the \$2,657,433.90 distributed to the 81 medical schools at the close of 1955 by the National Fund for Medical Education, 42 per cent was contributed through AMEF by physicians and their wives. Fifty-eight per cent was contributed by industry. The 1955 grant to our own University of Arkansas School of Medicine was \$25,614.00 and of this amount \$1,319.00 came from 38 contributors in Arkansas. Since 1951 our school has received \$108,652.00. The Auxiliary is aware of the importance of good medical training and will continue to exert every effort to assist our medical schools in maintaining their present high teaching standards.

"As wives of physicians we keep a watchful eye on medical legislation and try to keep alert and informed on current bills on both national and state levels.

"We are engaged in an active recruitment program which has been expanded this year to cover additional fields in medical careers. We now have more than 1,400 Future Nurses' Clubs in our high schools which were organized and are sponsored by local auxiliaries.

"Guided and advised by our medical societies, we are becoming increasingly active in the field of Mental Health Education. We are also urging our members to become well trained and prepared to assist in any local or national disaster through our Civil Defense Program.

"We hope that each one of you have in your reception room, as patients' reading material, 'Today's Health.' The AMA House of Delegates, by a resolution in 1931, requested that the Auxiliary make every effort to distribute this magazine which contains authentic health information.

"It has been possible this year to broaden our cooperation with the approved voluntary health agencies. The American Cancer Society has prepared special material for the Auxiliary and I have recently been appointed by the American Heart Association to its Committee on Volunteer Activities. We are interested in all phases of safety and work with the National Safety Council and the President's Committee for Traffic Safety. We are also participating in the Register and Vote Campaign of the American Heritage Foundation on a non-partisan basis because we recognize the importance of sharing the responsibility of government by voting in every election.

"As you can see, our program is varied and comprehensive. We work entirely under the jurisdiction of our Advisory Committees and only on projects which have their approval.

"Again, may I thank you for the opportunity to discuss informally the activities of your Auxiliary. You have made it possible for us to carry on a useful and productive program of active health leadership in our communities and we are indeed grateful that we can serve each one of you and the medical profession of our state and nation. We appreciate fully the fact that the Arkansas Medical Society has given us the recognition and cooperation that has helped to make our Auxiliary one of the most outstanding in the country today."

R. L. Sanders of Memphis brought greetings of the Southern Medical Association to the House of Delegates.

W. H. Anderson of Booneville, Mississippi, extended the fraternal greetings of the Mississippi State Medical Association.

Mr. C. P. Lorz of the Southern Medical Association was welcomed to the House of Delegates by Speaker Brown.

Mr. Leo E. Brown of Chicago, Director of the Department of Public Relations of AMA, was introduced to the House.

Upon the motion of Whitehead and Koenig, the House adopted as correct the minutes of the 87th Annual Session as published in the July 1955 issue of The Journal of the Arkansas Medical Society.

Chairman of the Council Louis K. Hundley of Pine Bluff read the following report of the Council:

During the year 1955-56, the Council conducted business for the Arkansas Medical Society as follows:

On July 24th, the Council:

1. Approved tentative plans for the 1956 Annual Session as presented by Joe Norton, Chairman of the Committee on Arrangements for Annual Session.
2. Heard the report of the Special Committee appointed to consider the appeal of Dr. Frank Riggall from the refusal of the Washington County Medical Society to accept him in membership. The Council voted to uphold the Washington County Medical Society and to refer the committee's report to the State Medical Board for whatever action it saw fit to take.
3. Directed that each county medical society be asked to publicly reiterate its stand that all patients, pay and indigent, are the responsibility of the individual physicians and that it urge its members to accept the care of indigent cases, tuberculosis and otherwise, and donate their services when needed to all such cases.
4. Refused to authorize payment of expenses for a committee member to attend the National Conference on Mental Health.
5. Adopted a resolution for presentation at the AMA Clinical meeting urging the Woman's Auxiliary to the American Medical Association to continue its efforts in behalf of the American Medical Education Foundation.
6. Voted that no statements concerning matters discussed by the Council be released to the press.

The Council met on September 25th and transacted the following business:

1. Appointed Eugene Crawley to attend the School Health Conference in Highland Park, Illinois.
2. Adopted a plan for distribution of polio vaccine. The Council directed that the plan be mimeographed and sent to all members not later than Monday, September 26th.
3. Approved payment of the President's expenses to the Public Relations Conference in Chicago.
4. The Council voted to pay the expenses of the President, Executive Secretary, Chairman of the Legislative

Committee, and the Society's attorney to the AMA legislative meeting in Dallas.

5. Decided to present the names of Wm. G. Cooper and Frank Kumpuris to the Governor for a vacancy occurring on the Arkansas State Cancer Commission.
6. Directed that in the future when nominations are to be made, the Council be notified in advance of the meeting.
7. Voted to join the Arkansas Public Health Association and elected Hugh Edwards as delegate to the association.
8. Elected W. R. Brooksher to represent the Society at a conference called by the Board of Trustees of the American Medical Association to be held in Chicago for studying the new Social Security Act, H.R. 7225.
9. Voted to give the editor authority to appoint an editorial board for the term of his office.
10. Approved the floor plan for commercial and scientific exhibits for the 80th Annual Session and directed that only the Garland Street entrance be used.
11. Referred to the Committee on Liaison with the State Board of Health the matter of the omission of paratyphoid A and B from typhoid vaccine furnished by the State Board of Health.
12. Referred to the Committee on Liaison with the Auxiliary the request of the Auxiliary Public Relations Committee that the Society sponsor a newspaper contest for the article most beneficial to the medical profession.

The Council met on October 16th in response to requests from various county medical societies and transacted the following business:

1. Amended the polio vaccine distribution plan adopted on September 25th so that vaccine could be administered in public health clinics or in physicians' private offices, at the discretion of each county medical society and so that all reference to percentage distribution of the vaccine between public health agencies and private physicians be deleted and that distribution be left to the State Health Officer.
2. Approved the State Medical Assistants Society sending representatives to a meeting in Kansas City to discuss the formation of a national medical assistants' organization.
3. Approved the Woman's Auxiliary to the Arkansas Medical Society joining the Arkansas Public Health Association.
4. Referred the Woman's Auxiliary to the Arkansas Medical Society to the Arkansas Medical Society Advisory Committee to the Auxiliary for help in arriving at a decision on the advisability of participating in a survey of mentally retarded children.
5. Elected Joe Verser to attend the AMA Legislative meeting in place of W. R. Brooksher who was unable to attend.
6. Voted approval of the Constitution submitted by the Arkansas Joint Commission for the Improvement of Patient Care;
7. Adopted a motion to commend the Polio Advisory Committee of the Arkansas Medical Society and John Herron, State Health Officer, for the great amount of work accomplished by them in connection with the polio vaccine distribution plan and expressed utmost confidence in Herron and the Committee.



Seated, left to right: President Fount Richardson and President-Elect T. Duel Brown. Standing, left to right: First Vice President Joseph A. Norton and Treasurer John Wm. Smith.

The Council met on December 18th and transacted the following business:

1. Directed that, in the future, any plans for Council meetings with Legislators and any action to be taken would be decided by the Legislative Committee of the Society and recommended to the Chairman of the Council for action.
2. Directed the Chairman to appoint a committee of three to investigate the desirability of a proposed school contest for the best review of a planned television program based on the 80th Annual Session of the Society, authorizing the appointed committee to agree to pay up to \$800.00 in prizes.
3. Referred to the Arkansas State Arbitration Commission the problem of complicated insurance forms and requested that it work out a simplified universal form for use on all insurance claims.
4. Voted to take no action on the Auxiliary request for a prize to be given for the best article about medicine.
5. Designated Mr. Warren to represent the Arkansas Medical Society before the American Medical Association Judicial Council when it hears the appeal of the Arkansas Medical Society action by Dr. Frank Riggall.
6. Directed the chair to appoint a committee to study a retirement plan for the employees of the headquarters office.
7. Voted to approve the insurance principle for medical care for military dependents but to withhold final approval of the plan submitted by the Defense Department pending working out of important details.

Published committee reports were referred to either Reference Committee Number One (C. C.

Long, Ozark, Chairman, R. H. Manley, Clarksville, and Brooks R. Teeter, Russellville) or to Reference Committee Number Two (E. L. Hutchison, Pine Bluff, Chairman, Paul Gray, Batesville, and Julius H. Hellums, Dumas).

A supplementary report of the Committee on Medical Education was read by Jack Kennedy. The Speaker assigned the supplementary report to Reference Committee Number One.

Thomas A. Alphin, Director of the Washington Office of the American Medical Association, was introduced and spoke to the House on matters of legislation of interest to the medical profession which are now being considered by Congress.

The Speaker announced the terms of members of the State Board of Health from the First, Fourth and Fifth Congressional Districts would expire and announced meetings of members from those districts for the purpose of nominating three members from each district for approval by the House and submission to the Governor.

The Speaker announced that a vacancy would occur on the Arkansas State Medical Board for the position from the First Congressional District and designated a time and place of meeting for members from that district to select a nominee to fill the vacancy.

Delegates from the various Councilor districts held meetings on the floor and selected the nominating committee as follows: First District, Eldon Fairley; Second District, N. C. David, Jr.; Third District, Gordon Duckworth; Fourth District, H. T. Smith; Fifth District, Perry Dalton; Sixth District, R. C. Dickinson; Seventh District, P. R. Anderson; Eighth District, Ellery Gay; Ninth District, Max McAllister; Tenth District, L. A. Whittaker.

The House adjourned at 5:00 p. m.

Monday Evening, April 23rd

Private parties and dinners were scheduled.

All members of the Society and their guests were invited to a cocktail party at the Little Rock Country Club by the following individual members of the Pulaski County Society:

Dale Alford	Paul Hickey
Hoyt Allen	Henry Hollenberg
Ted Bailey	Robert D. Jones
James Barker	John Hundley
Barney Briggs	H. Fay H. Jones
E. H. Crawley	Deane Wallace
Vernon L. Toombs	Merlin Kilbury, Sr.
Joseph Buchman	Frank Kumpuris
Walter Carruthers	Richard Logue
Alan Cazort	O. C. Melson
Ewell Thompson	Melvin McCaskill
Raymond Cook	Frank Padberg
Calvin Dillaha	W. J. Rhinehart
Fred Gray	Joe A. Norton
Harry Hayes	George Regnier
James Headstream	W. J. Schwarz
Charles Henry	Robert Watson

SECOND GENERAL SESSION

Tuesday, April 24th, 9:00 a. m.

Lecture Hall, Robinson Auditorium

The meeting was called to order by Wm. B. Harrell and proceeded as follows:

- Marvin Johnson, University of Colorado, Denver, "Esophageal Hiatus Hernia."
- Clement A. Smith, Lying-In Hospital, Boston, "Why and How to Take Care of Premature Infants."
- Harry Spence, Southwestern Medical School of University of Texas, Dallas, "A Review of the Kidney Stone Problem."
- C. Paul Hodgkinson, Henry Ford Hospital, Detroit, "Hypofibrinogenemia."
- George A. Hallenbeck, Mayo Clinic, Rochester, "Surgical Treatment of Obstructive Jaundice."
- Willard Cooke, University of Texas Medical Branch, Galveston, "The Indications for Treatment of Uterine Myomata."
- A. E. Braley, University of Iowa, Iowa City, "Diagnosis and Treatment of External Inflammation of the Eyes in Infants."

MEMORIAL SERVICE

Tuesday, April 24th, 11:50 a. m.

Members who had passed away during the year were honored at a Memorial Service presided over by President L. H. McDaniel. Invocation was given by the Reverend John Lindsey, Assistant Pastor, First Methodist Church, Little Rock.

The memorial address was given by John William Smith:

IN MEMORIAM

Each year as we meet again in our Convention we set aside a time such as this—to remember and pay tribute to those of our friends who have left our visible presence during the year.

A quietude falls over us all—a solemnity—a sadness. This is expressive of what we feel is our great loss. But if, on the other hand, we think of **their** gain, we will approach this moment—this time—in a triumphant mood, saying, "True it is, they are not here, they are risen. They have gone on to a greater life for which this life was lived—the eternal life which has been promised to us."

Our thoughts then today are not to be thoughts of sorrow—thoughts of hopelessness—thoughts of loneliness—but rather they are to be triumphant thoughts that a more glorious life is now theirs.

May this truly be a memorial day in our hearts. May our monuments be prayers of gratitude and hope—gratitude to those to whom we owe so much—and hope that we may be worthy of their sacrifice.

The phase of life which we call death is never easy, because it means separation from our loved ones. It means hours of loneliness—a severance of sacred ties and memories. It is not easy to go on without the fun—the fervor—and the joy of a perfect companionship. And so, with great understanding and humility, we extend to the families and loved ones of our friends our deepest sympathy and love.

Sorrows and disappointments seem to come more to some than to others, but to some extent to us all. But out of sorrows come lovely and beautiful things. Those we have lost inspire us to grander and nobler living. Instead of becoming bitter we become better. And so, in the years to come, we must strive to make our lives compensate for those we have lost.

It is one of our failings that we too often measure life by its length rather than by its quality. However, it is not the space of years that counts but life itself. Even a day, an hour, a few short years that brought out and summoned all that was best is worth our enduring thanks. Let us not cloud our memories that it could not last forever. Nothing lasts forever in this world. Let us put our emphasis on quality and not quantity and be glad because we had and knew what was good and fine. Let us not think too much about the ending of an experience, but think rather of the beauty of it. It is not the length of life that matters but how it is lived that counts.

"Not the years we've traveled
But the good we've done,
Is life's truest measure
At its setting sun."

It is easy and a pleasure to recall the lives and the achievements of our friends who gave so freely of them-

selves—their skills—their resources—and their talents to all the demands made upon them by their churches, their communities, and the sick and suffering who came to them.

Our friends were beloved and respected both as citizens and as great physicians, for their lives were ones of selfless, dedicated service to their fellow man. Their characters were molded of the finest qualities of humility—courage—responsibility—loyalty—personal sacrifice—and devotion to duty.

Said Longfellow:

"When a great man dies
For years beyond our ken
The light he leaves behind him lies
Upon the paths of men."

And we who are here know the truth of this verse, for we will ever be richer as individuals and as a profession for the light—the memories—they have left behind.

To the members of the Auxiliary who have passed on, you were truly partners. You were married to a profession to which you had to be selfless. You had to share your husband with the public and his patients. The demands that were made upon him had to come before you and your children. Yours was a difficult position to fill. It was one that required understanding—patience—and love. How many times you smoothed the way for us. You were the unsung heroes—our wives—our helpmates.

Death is no stranger to physicians. We meet it time and time again. We see it often as "God giving to His beloved, sleep"—freedom from pain and suffering when human skills can do no more. We see our patients facing death with courage; some with anticipation that they are embarking on a great adventure, or that they are going home to their Father's house, claiming the promise "In my Father's house are many mansions." It is often our privilege to hear the last words when, like Edison, they exclaim, "It is so beautiful over there." William McKinley died singing "Nearer My God to Thee." Dwight L. Moody said, "All is light—God is calling me."

Some time ago McCall's Magazine asked nine eminent physicians to write an article on "How It Feels to Die." The article quoted a statement by the famous Dr. William Osler in which he said, "Most human beings not only die like heroes, but in my wide clinical experience, die really without pain or fear." All nine doctors agreed with that statement.

Dr. H. D. Van Fleet, summing up the findings of all nine doctors, said, "I use the word sweetness in connection with death. As a doctor who has seen many people expire I know it is often sweet to die. Frequently I have seen a change of expression as the moment of death approached, almost a smile, before the last breath was taken. Science cannot explain this, as science cannot explain the dynamic power which controls life. What one may see at the point of death will probably remain an eternal mystery. But it should remain, too, a vision with no terror for any of us."

Thomas Wolfe, who passed away at the height of his popularity as a writer, said, "To lose the earth you know for greater knowing; to lose the life you have for greater life; to leave the friends you love for greater loving; to find a land more kind than home—more large than earth—that's death."

Our friends have stood as we some day will stand before the Master Examiner to take, not their physical with which they are so familiar but their spiritual. And to that question "Have you kept and been faithful to the great oath you took to give fine and noble service to your fellow

man?" they could truly say, with Paul, "We knew neither bond or free, Jew nor Greek nor barbarian, we served all alike, as our fellow man, as our equal. All barriers of race, creed and color were forgotten. We gave our best skill to friend and foe alike. We tried as hard to save the life of a criminal as we did the life of a saint, for the knowledge which heals belongs to all." Then did the Great Physician say, "Peter, let them in, for they are ready now for their great reward, a new and higher service."

As the names of our friends who have passed from us were read, a picture of each one of them known to us personally passed before our mind's eye. What were the significant features of these personality portraits as they flashed in our minds? Perhaps we thought of the superb skill of some—or we recalled a few spectacular accomplishments of others. Yet these are not the things we recall most fondly of those we have known best. Were not the things that made us love and admire them—that drew us to them—a bit of friendliness expressed in a smile?—some selfless act of devotion?—or maybe we remember when as a young doctor the words of encouragement they gave us—the assurance they gave when we were in doubt.

This is the medical profession at its best. These men carried on the noblest traditions which have been handed down to us—the truly good. There is no greatness without goodness, and so we say,

Dear Friends,

We thank you for coming to live with us. Your lives have greatly enriched ours. The world is better for your having lived. Thank you for setting your goals high and showing us that they could be reached. We're sorry you are gone—we miss you. We thank you for the inspiration you have left with us to do our best. We pick up the torch you carried so high while you were here with us. We will keep the sacred flame alive—the one you fed with your skills and sacrifice to heal and save life. And so we say to you, from us, Till We Meet Again.

President McDaniel read the names of the deceased:

Burrell L. Bennett, Van Buren, December 2, 1955
A. A. Blair, Fort Smith, October 24, 1955
John F. Brewer, North Little Rock, October 19, 1955
E. R. Browning, Hot Springs, October 4, 1955
Riley Cowan, Van Buren, October 8, 1955
J. B. Crawford, Little Rock, February 22, 1956
W. R. Felts, Sr., Judsônia, November 17, 1955
D. M. G. Frailey, Harrison, March 19, 1956
William B. Gould, Glenwood, August 2, 1955
C. J. Higinbotham, Pine Bluff, September 21, 1955
J. B. Jameson, Camden, January 2, 1956
S. C. Johnson, Kingsland, August 31, 1955
S. D. Kirkland, Van Buren, April 20, 1955
Newton J. Latimer, Corning, December 29, 1955
Isaac N. McCollum, Conway, March 10, 1956
C. N. Pate, Hot Springs, October 1, 1955
Finis E. Rushing, Augusta, August 31, 1955
Randolph T. Smith, Little Rock, March 22, 1956
R. O. Smith, Biggers, April 26, 1955
A. W. Strauss, Little Rock, December 17, 1955
J. A. Summers, Little Rock, July 14, 1955
Charles D. Tibbels, Black Rock, October 23, 1955
Fred Youngblood, Huntsville, February 24, 1956

Mrs. John T. Gray, President of the Woman's Auxiliary, read the names of the following deceased members of the Auxiliary:

Mrs. G. Reginald Siegel, Clarksville, June 27, 1955

Mrs. A. C. Modelevsky, Jonesboro, March 17, 1955

Mrs. Wanda Saxon Reynolds sang.

The Reverend Lindsey pronounced the benediction.

SPECIAL SECTIONS PROGRAMS E.E.N.T.

The Section on Eye, Ear, Nose and Throat convened at 10:00 a. m. and heard the following program:

N. B. Burch, Hot Springs, Chairman's Address.

Charles S. Lane, Jr., Fort Smith, "Surgical Problems Involved in the Removal of Glomus-Jugulare Tumors."

Harold G. Tabb, New Orleans, "Stapes Mobilization for Restoration of Hearing in Otosclerosis."

Max Baldridge, Texarkana, "Pathological Findings in Enucleated Eyes."

A. E. Braley, University of Iowa, Iowa City, "Surgery of the Lacrimal Gland."

SURGERY

The Section on Surgery met at 12:30 for a luncheon presided over by Frank Kumpuris, held in the Banquet Hall of the Hotel Marion, followed by a talk on "Arteriovenous Aneurysms" by Marvin Johnson of Denver and "Surgical Treatment of Esophageal Varices" by George Hallenbeck of Mayo Clinic, Rochester.

PEDIATRICS — ARKANSAS ACADEMY OF GENERAL PRACTICE

The Section on Pediatrics met in the Rendezvous Room of the Marion Hotel for a luncheon presided over by James T. Rhyne, and adjourned to the Lecture Hall, Robinson Auditorium, for a joint symposium with the Arkansas Academy of General Practice, at which Vida Gordon presided. Participating in a discussion on "Resuscitation of the Newborn" were: Clement A. Smith, Boston, Ben N. Saltzman, Mountain Home, and Willis Brown, Little Rock.

OBSTETRICS - GYNECOLOGY

The Section on Obstetrics and Gynecology met for luncheon at the Hotel Marion, preceding the scientific program:

Calvin Simmons, Pine Bluff, "Maternal Mortality in Arkansas."

C. P. Hodgkinson, Detroit, "Pregnancy Following Cardiac Surgery."

Melvin R. McCaskill and Charles P. Wickard, Little Rock, "Experiences in the Use of Chlorpromazine (Thorazine) During Labor and Delivery."

Willard R. Cooke, Galveston, Texas, "Dysmenorrhea."

Fred Stone, Stuttgart, and James Mashburn, Fayetteville, "Obstetrical Experience in General Practice."

John Walter Jones presided.

UROLOGY

The Section on Urology met at 12:30 for luncheon, followed by a "Pyelogram Clinic" conducted by Harry Spence. Grady Reagan presided.

Tuesday Afternoon, April 24th

The Pulaski County Medical Society entertained with a social hour from 5:30 to 7:30 p. m. preceding the annual dinner and dance in the Hotel Marion Ballroom beginning at 8:00 p. m. 479 members and guests attended the dinner. E. H. Wilkes presented the prizes for golf and skeet. Winners for the first three prizes for the two events were as follows:

GOLF—Handicap trophy: Ralph Downs, Fort Smith. Low score: Fred Gordy, Jr., Conway; Samuel V. Richmond, Little Rock; Grimsley Graham, Little Rock.

SKEET—W. D. Thornton, Texarkana; James W. Hawley, Camden; D. B. Cheairs, Little Rock.

The dance continued until 1:00 a. m.

Wednesday Morning, April 25th

Lecture Hall, Robinson Auditorium

John P. Wood presided over the session Wednesday morning devoted to the University of Arkansas Medical Center. Talks were as follows:

F. Douglas Lawrason, Provost, Medical Center, "Objectives of Medical Education."

James Dinning, Little Rock, "Preparation for Medicine."

James T. Wortham, Little Rock, "The Changing Curriculum."

Mr. Nelson Evans, Administrator, University Hospital, "The Role of a University Hospital in Medical Education."

David M. Gould, Little Rock, "Some New Approaches in Teaching Radiology."

FINAL SESSION

HOUSE OF DELEGATES

Wednesday, April 25th, 1:30 p. m.

Lecture Hall, Robinson Auditorium

Speaker Brown called the House of Delegates to order.

The following Delegates and members seated as Delegates by action of the House were present:

ARKANSAS, R. H. Whitehead; BAXTER, H. K. Baldridge; BOONE, Hugh M. Fogo; BRADLEY,

George Wynne; CHICOT, A. G. Talbot; CLARK, P. R. Anderson; CRAIGHEAD-POINSETT, L. H. McDaniel, Charles G. Swingle, R. C. Hooper; CRITTENDEN, T. S. Hare; CROSS-ST. FRANCIS, Gordon Duckworth; DESHA, H. T. Smith; DREW, Van C. Binns; FRANKLIN, C. C. Long; GARLAND, Euclid Smith, James Leatherman, Lon E. Reed; GRANT, Miles F. Kelly; GREENE-CLAY, James C. Bethel; HOT SPRING, C. Randolph Ellis; INDEPENDENCE, Charles A. Taylor; JEFFERSON, Howard S. Stern, Charles W. Reid; JOHNSON, W. R. Scarborough; MADISON, Charles Beeby; MISSISSIPPI, Eldon Fairley; OUACHITA, James W. Hawley; PHILLIPS, Reuben L. Chrestman; POLK, L. K. Williams; POPE-YELL, J. Arnold Henry; PULASKI, M. J. Kilbury, Jr., Andrew Pringos, John McCollough Smith, Bill Dave Stewart, Edgar Easley, G. W. S. Ish, Edwin F. Gray, Gordon P. Oates, Robert Jones, James W. Headstream, Ellery C. Gay; RANDOLPH, W. E. Hamil; SALINE, O. W. Davenport; SCOTT, Harold B. Wright; SEBASTIAN, L. A. Whittaker, A. S. Koenig, W. R. Brooksher; UNION, George Burton, D. E. White; WASHINGTON, Fount Richardson, Max McAllister; WHITE, N. C. David, Jr.; WOODRUFF, Fay B. Milwee.

The following Councilors were present as members of the House of Delegates:

First District, Joe Verser; Second District, Hugh Edwards; Third District, J. Max Roy; Fourth District, Louis K. Hundley; Fifth District, Perry Dalton; Eighth District, Elvin Shuffield; Ninth District, Ross Fowler; Tenth District, James M. Kolb.

R. C. Dickinson presented the report of the Nominating Committee:

FOR PRESIDENT-ELECT:

T. Duel Brown, Little Rock;
H. T. Smith, McGehee.

FIRST VICE PRESIDENT:

Joseph A. Norton, Little Rock.

SECOND VICE PRESIDENT:

Reuben L. Chrestman, Jr., Helena;
John T. Gray, Jonesboro;
Julius H. Hellums, Dumas.

THIRD VICE PRESIDENT:

Paul T. Stroud, Jonesboro;
Joe B. Wharton, Jr., El Dorado.

SECRETARY:

J. J. Monfort, Batesville.

TREASURER:

John Wm. Smith, Little Rock.

SPEAKER OF HOUSE OF DELEGATES:

C. C. Long, Ozark.

VICE SPEAKER OF HOUSE OF DELEGATES:

Clyde D. Rodgers, Little Rock.

COUNCILORS:

Second District: Hugh R. Edwards, Searcy.
Fourth District: Louis K. Hundley, Pine Bluff.
Sixth District: John P. Wood, Mena.
Eighth District: H. Elvin Shuffield, Little Rock.
Tenth District: James M. Kolb, Clarksville.

VICE COUNCILORS:

Second District: John W. Sneed, Jr., Conway.
Fourth District: H. W. Thomas, Dermott.
Sixth District: Wm. B. Harrell, Jr., Texarkana.
Eighth District: Robert D. Jones, Little Rock.
Tenth District: L. A. Whittaker, Fort Smith.

DELEGATE TO AMERICAN MEDICAL ASSOCIATION:

James M. Kolb, Clarksville.

ALTERNATE DELEGATE TO AMERICAN MEDICAL ASSOCIATION:

Fount Richardson, Fayetteville.

FRATERNAL DELEGATE TO MISSISSIPPI STATE MEDICAL ASSOCIATION:

L. H. McDaniel, Tyrone.

Reuben L. Chrestman nominated M. J. Kilbury, Sr. for the office of President-Elect.

Upon a written ballot T. Duel Brown of Little Rock was elected.

No nominees from the floor were received for the office of First Vice President and Joseph A. Norton was elected by acclamation.

Upon written ballot Julius H. Hellums of Dumas was elected Second Vice President.

Paul Stroud and Joe B. Wharton, Jr., not having attended the 80th Annual Session, were ruled ineligible for election. Ben N. Saltzman of Mountain Home was nominated by O. W. Davenport, Fay B. Milwee of McCrory was nominated by Reuben L. Chrestman, and T. E. Rhine of Thornton was nominated by Perry Dalton. By written ballot, Ben Saltzman was elected to the office of Third Vice President.

Upon motion of James M. Kolb, the nominees for the remaining offices were elected by acclamation.

The report of Reference Committee Number One was read by Chairman C. C. Long:

REPORT OF REFERENCE COMMITTEE NUMBER ONE

C. C. LONG, Ozark, Chairman

R. H. MANLEY, Clarksville

BROOKS R. TEETER, Russellville

Reference Committee Number One met at the Marion Hotel on April 24th and recommends the approval of the following committee reports as presented in the March 1956 issue of the Journal of the Arkansas Medical Society, the report of the Cancer Commission, and the supplemental report of the Committee on Medical Education:

Committee on Medical Education.

Sub-Committee on Postgraduate Education.

Committee on Hospitals.

Sub-Committee on Liaison with Blue Cross-Blue Shield.

Committee on Veterans Administration Affairs.

Report of AMA Delegates.

Budget Committee.

Committee on Scientific Program and Arrangements for Annual Session.

Committee on Public Relations.

Sub-Committee on State Health and Medical Resources for Civil Defense.

Report of the Executive Secretary.

Medical Arbitration Committee of the Industrial Health Committee.

Committee on American Medical Education Foundation.

Reference Committee Number One wishes to commend our delegates to the AMA convention—James M. Kolb and R. B. Robins—for their fine representation of Arkansas at that meeting and to express our appreciation of the favorable publicity they attracted to our organization.

Reference Committee Number One calls attention to the fact that little or nothing of controversial nature was contained in the committee reports submitted to us.

Upon motion of C. C. Long, seconded by R. C. Hooper, the Report of Reference Committee Number One was adopted.

The report of Reference Committee Number Two was read by Chairman E. L. Hutchison of Pine Bluff:

REPORT OF REFERENCE COMMITTEE NUMBER TWO

E. L. HUTCHISON, Chairman

PAUL GRAY, Batesville

JULIUS H. HELLUMS, Dumas

Reference Committee Number Two met during the Annual Session of the Arkansas Medical Society at the Robinson Auditorium, Little Rock, Arkansas, on April 24, 1956, and considered the various committee reports and recommendations which had been referred to it.

The Committee reports as follows:

It recommends approval of the following committee reports as published in the March, 1956, issue of the Journal of the Arkansas Medical Society:

Committee on Public Health.

Sub-Committee on Rural Health.

Sub-Committee on Maternal and Child Welfare.

Sub-Committee on Industrial Health.

Sub-Committee on Tuberculosis.

Sub-Committee on Mental Health.

Sub-Committee on Liaison with the State Board of Health.

Polio Advisory Sub-Committee.

First Councilor District Professional Relations Committee.

Second Councilor District Professional Relations Committee.

Third Councilor District Professional Relations Committee.

Fourth Councilor District Professional Relations Committee.

Sixth Councilor District Professional Relations Committee.

Seventh Councilor District Professional Relations Committee.

Eighth Councilor District Professional Relations Committee.

Tenth Councilor District Professional Relations Committee.

Sub-Committee on Liaison with the Nursing Profession.

Sub-Committee on Liaison with the Auxiliary.

Report of the State Board of Health.

Report of the Arkansas State Medical Board.

Report of the Arkansas State Advisory Committee to Selective Service.

Sub-Committee on Liaison with the State Board of Health.

In addition, Reference Committee Number Two considered further recommendations by the Sub-Committee on Maternal and Child Welfare submitted before the House of Delegates and recommends approval as set forth.

Upon motion of E. L. Hutchison, seconded by H. T. Smith, the report of Reference Committee Number Two was adopted.

Louis K. Hundley, Chairman, read a supplementary report of the Council as follows:

REPORT OF THE COUNCIL

The Council met Sunday night, April 22nd, at 8:00 P. M. at the Marion Hotel, Little Rock, and transacted the following business:

1. Heard a letter from the American Medical Association commending Dr. Fount Richardson for the excellence of his presentation before the Senate Finance Committee of the United States Senate opposing Social Security amendments H.R. 7225.

2. Approved, subject to further checking, and referred to the House of Delegates for final action, the applications for life membership of the following members:

M. A. Shelton

John M. Stanford

J. G. Wilson

Charles S. Wilson

3. Approved and referred to the House of Delegates for further action the applications for affiliate membership of the following members:

Retirement

J. L. Parker	Homer A. Higgins
H. M. Kitchens	George B. Alcott
James B. Strachan	Frank Gordon
Eugene Stevenson	L. H. Lanier
Charles F. Bloom	

Financial Hardship

J. K. Donaldson	J. S. Wilkins
J. J. Danner	Loren O. Bohnen
Paul T. Hudgins	Paul H. Woods
Joe Bill Hall	Howard Kitchens
Anthony DePalma	Jack Mobley
Wm. R. Meredith	

Disabled

Marvin T. Crow	S. T. W. Cull
J. D. Riley	Dewell Gann, Jr.
H. L. Brown	James R. Scarborough
Frank Norwood	James R. Wayne
W. A. Fowler	Bryce Cummins
J. Donald Hayes	Guy Hodges
Shelby Atkinson	Robert Hood
T. E. Burgess	

4. Approved and referred to the House of Delegates for further action the applications for military memberships for the following members:

Raymond E. Pinkerton	Billy P. Sammons
W. J. Lee	Oscar Gray, Jr.
Albert Rosendale	Lloyd F. Gregory
Ralph Joseph	James P. Jernigan
Edward R. Duty	Vern E. Morgan
C. W. Jones, Jr.	Wm. D. Sessoms
W. R. Lee	
 5. Heard reports by Society attorneys on the present status of the law suit by Dr. Frank Riggall against officers of the Arkansas Medical Society.
 6. Directed the attorneys to defend with the utmost vigor the Society officers subject to Dr. Riggall's suit.
 7. Approved the renewal of the Society's contract with the Veterans Administration for the coming year.
 8. Discussed and approved the budget as published in the March 1956 issue of the Arkansas Medical Society Journal and voted a wage increase for the Executive Secretary.
 9. Accepted and approved the audit report for year ending March 31, 1956.
 10. Referred the Constitution submitted by the Medical Assistants Society to the Committee on Legislation for study and recommendations.
 11. Approved Executive Committee action in the following instances:
 - (1) Increasing by 15 per cent the advertising rates for national advertisers in the Journal of the Arkansas Medical Society;
 - (2) Sending President-Elect Fount Richardson to Washington to testify against H.R. 7225;
 - (3) Directing that the Council be polled for authority for the Medical Society to pay legal expenses for the Society officers who are defendants in the suit by Dr. Frank Riggall.
 12. Authorized the signing of a contract by the Arkansas Medical Society with the State Medical Journal Advertising Bureau, Inc.
 13. Referred to the Committee on Constitutional Revision the question of establishing a standing committee on insurance matters.
 14. Studied the claims made in a circular received from the Spears Chiropractic Clinic of Denver, Colorado, and referred it to the Committee on Legislation for its study and recommendations.
 15. Referred to the Legislative Committee a recommendation for legislation which would protect professional persons practicing outside their field during a civil defense emergency.
 16. Nominated for the Arkansas State Cancer Commission: W. R. Brooksher, Fort Smith, and Vernon E. Sammons, Hot Springs, whose names will be presented to the Governor for selection.
 17. Nominated for the Arkansas State Arbitration Commission: From the Second District, T. L. Adair, Bald Knob; from the Third District, J. P. Williams, Jr., Brinkley.
 18. Authorized the Executive Committee and the Treasurer to cash United States Government bonds reaching maturity and to re-invest the funds.
 19. Directed the Chairman to appoint a resolutions committee to consider and make recommendations on resolutions presented to the Council. Appointed were: Ross Fowler, Perry Dalton, R. C. Dickinson, and (ex-officio) Mr. Peter Deisch.
 20. Directed that a permanent committee of one experienced member of the Society and two members who are recent graduates of the medical school be appointed to plan and conduct a senior medical day. Appointed were: W. R. Brooksher, Fort Smith, Chairman; Calvin R. Simmons, Pine Bluff, and Wayne P. Jones, Marshall.
 21. Voted to purchase 100 subscriptions through the Women's Auxiliary to "Today's Health" for one year.
- The Council met at 7:30 A.M., Monday, April 23rd, 1956, at the Marion Hotel, Little Rock, and transacted the following business:
1. Nominated for the Board of Trustees of Blue Cross-Blue Shield, Jabez F. Jackson of Newport.
 2. Heard F. Douglas Lawrason, Provost of the Medical Center, discuss the problems of the Medical Center and plans for its future developments.
- The Council met at 7:30 A.M., Tuesday, April 24th, 1956, and transacted the following business:
1. Heard recommendations by Sam Jameson of El Dorado that the Society organize an insurance committee to handle any insurance problems arising and recommending legislation protecting the public against undesirable and misleading health insurance policies.
 2. Voted to recommend to the House of Delegates an amendment to the Constitution of the Arkansas Medical Society which would establish an insurance committee.
 3. Heard a report by J. J. Monfort on the necessity for and the status of plans for national and state civil defense programs.
 4. Heard information by letter from the State Board of Health regarding new regulations allowing sale without prescription of infantol pink products containing paragoric.

5. Appointed a committee to consider the establishment of a Memorial to John Wyeth, early Arkansas physician and benefactor.
6. Referred to the Committee on Resolutions a resolution commending the Governor's Advisory Committee on Education for the work it has done.

The Council met at 7:30 A.M., April 25th, 1956, at the Marion Hotel in Little Rock and transacted the following business:

1. Voted to approve the following resolutions:
 - A. A resolution commending the Governor's Advisory Committee on Education;
 - B. A resolution expressing appreciation to the Ford Foundation for its help to many Arkansas hospitals;
 - C. A resolution of appreciation to the Pulaski County Medical Society, hosts to the 80th Annual Session.
2. Approved the report of the Maternal Welfare Committee of the Arkansas Obstetrical-Gynecological Society recommending a study of maternal mortality and indicating a need for continuation of its program.
3. The Council considered and endorsed the recommendations of the Advisory Committee of the Perry County Rural Health Project.
4. Referred to the Committee on Liaison With the Nursing Profession the matter of minimum standards for nurse employment which were adopted by the Arkansas Nurses Association.
5. Voted to request that the State Board of Health, the Arkansas State Medical Board, and the Society's attorney confer and try to come to an agreement on the disposition of a case of narcotics violation.
6. Voted to take no action on a request that an individual eclectic physician be accepted as a member in the State Medical Society.
7. Agreed to delete the reference to the State Arbitration Commission from the amendment to create a Committee on Insurance, voted by the Council on April 24th.

Upon motion by Hundley, seconded by J. Arnold Henry, the House adopted the report.

Mr. Schaefer read the report of the nominating committees for vacancies occurring on the State Board of Health:

- First District: Eldon Fairley, Wilson; Floyd Dozier, Marianna; Charles G. Swingle, Marked Tree.
- Fourth District: Warren S. Riley, El Dorado; Garland D. Murphy, Jr., El Dorado; Perry Dalton, Camden.
- Fifth District: J. Arnold Henry, Russellville; Alan Cazort, Little Rock; Jerome S. Levy, Little Rock.

Upon motion of John McCollough Smith, seconded by R. H. Whitehead, the House approved the list of nominees.

Mr. Schaefer announced that J. Max Roy had been nominated for the first congressional district position on the Arkansas State Medical Board. Upon motion of Eldon Fairley, seconded by Howard Stern, the House approved the nomination.

James M. Kolb introduced the following proposed amendments to the By-Laws of the Arkansas Medical Society:

Chapter 8, Section 1 (A) (Section on Standing Committees)—Add as Committee Number 10: Committee on Insurance.

Chapter 8, Section 1 (A) (Section on Standing Committees)—Delete from Committee Number 5: the Subcommittee "Blue Cross" so that it shall read: Chapter 8, Section 1 (A) 5. Committee on Hospitals (Hospital Liaison and Arkansas Hospital Association).

Chapter 8, Section 10 (Committee on Arrangements)—Change to: Section 11 (Committee on Arrangements).

Chapter 8—Add as Section 10: The Committee on Insurance shall deal with all matters pertaining to insurance, including Liaison with Blue Cross-Blue Shield.

Ellery Gay and L. H. McDaniel spoke briefly praising the work of Mr. Jack Redheffer, deceased, in bringing the Arkansas Medical and Hospital Service to its present stature. Upon motion of Gay, the House expressed, by its vote, complete confidence in Mr. Redheffer's successor—Mr. John Rowland, who spoke briefly thanking the Medical Society for its continued support of Blue Cross-Blue Shield.

Mr. Schaefer read the report of the Legislative Committee for Chairman Joe Shuffield:

REPORT OF THE LEGISLATIVE COMMITTEE

JOE F. SHUFFIELD, Chairman

No legislative session being held this year, we have devoted our time to a study of the various institutions that involve medical care; namely, the Medical Center, the State Hospital for Nervous Diseases, and the Booneville and McRae Sanatoriums. We trust it is the wish of the House of Delegates that the Legislative Committee assist those agencies in procuring proper appropriations from the Legislature.

The letter of Robert F. Hyatt, Jr. calls attention to extravagant claims of the Spears Chiropractic Sanatorium of Denver. We have examined the literature issued by that Sanatorium and feel that it is so misleading that it probably involves use of the mails to defraud. We suggest that the Legislative Committee be authorized to place this material in the possession of postal inspectors, and further that it be called to the attention of the State and National Cancer Societies.

The State Hospital Association and the State Department of Welfare inform us that if the appropriation for hospital care for indigents, which is now \$200,000.00 annually, be increased by an added \$300,000.00, making a total of a half million dollars, that it would qualify the State to receive a grant of one and a half million dollars from the National Government. This total sum of two million dollars would be expended among all of our hospitals, including the Medical Center Hospital, to pay for hospital care for indigents.

If the House of Delegates desires us to use our efforts to that end, we request its approval.

The Office of Civil Defense suggests that Act 321 of 1953, being the law under which it operates, be amended to permit the holders of professional licenses, who are authorized civil defense workers, while working as such, to be permitted to practice their skills during a civil defense emergency. This would protect a dentist, in case of emer-

gency, while acting as a civil defense worker, if he found it desirable to do such necessary first-aid surgical work as he deemed proper.

This seems to be a meritorious suggestion, and would be of assistance to our people. We ask your opinion as to whether we should cause to be introduced a bill for that purpose, and attempt to have it passed.

Upon the motion of Verser and Smith, the House adopted the report.

Upon the motion of Kolb, seconded by Shuffield, the House approved for first reading amendments which would direct the House to select the annual meeting place two years in advance. The amendments to read as follows:

Article VIII, Section 2 (Constitution)—Add at end of first sentence "two years in advance."

Chapter II, Section I (By-Laws)—Delete "preceding" from first sentence and add at end of sentence "two years in advance."

With these changes the sections would read as follows:

"Article VIII, Section 2 (Constitution)—The place for holding each annual session shall be decided by the House of Delegates two years in advance. After conferring with the President and Secretary of the Society, the time for holding each annual session shall be decided by the Committee on Arrangements of the component society of the county in which the meeting is to be held.

Chapter II, Section I (By-Laws)—The Society shall hold an annual session at such place as has been fixed by the House of Delegates at the annual session two years in advance.

Upon the motion of Verser, seconded by John Wm. Smith, the House of Delegates voted that Arkansas should again participate in selecting a general practitioner of the year with the stipulation that there should be no expense to the Arkansas Medical Society. Motion was adopted by standing vote of 23 to 9.

Upon the motion of Verser and J. Arnold Henry the House voted to authorize James Kolb and C. C. Long to attend a conference on Medical Care in the Bituminous Coal Mine Area to be held in Charleston, West Virginia.

The following resolution was introduced by L. H. McDaniel and adopted by the House:

The Arkansas Medical Society wishes to thank and express their appreciation to the scientific, technical and commercial exhibitors for their cooperation in helping to make this 80th Annual Session a success.

FINAL GENERAL SESSION

April 25th, 3:00 P.M., Robinson Auditorium

President McDaniel called the meeting to order and presented the past presidents seated on the platform.

At the request of President McDaniel, H. Fay H. Jones and R. B. Robins escorted President-Elect Fount Richardson to the platform where he

took the oath of office administered by President McDaniel.

President Richardson addressed the meeting:

Thank you for this confidence. I shall remember that there are many duties that go with every honor.

It is my hope that we set worthy goals for the coming year, that we work earnestly for their accomplishment, and that this year goes down as one of many years of continuing achievement, that has always been the prime motive of the Arkansas Medical Society.

At the request of President Richardson, H. Fay H. Jones and R. B. Robins escorted President-Elect T. Duel Brown to the rostrum and presented him to the Society. Brown briefly thanked the members for the honor they had bestowed upon him and promised to devote himself for the next two years to the betterment of the profession of medicine.

Upon behalf of the Pulaski County Medical Society, Elvin Shuffield extended an invitation for the Arkansas Medical Society to hold its 1957 meeting in Little Rock. Upon motion of Kolb and Verser, the Society voted to accept the invitation. The Society adjourned its 80th Annual Session at 3:30 P.M.

COUNCIL MEETING

The new Council met immediately following the adjournment of the general session and elected by acclamation Louis K. Hundley as chairman. Alfred Kahn of Little Rock was elected editor of the Journal for the ensuing year.

SUPPLEMENTAL REPORT

COMMITTEE ON MEDICAL EDUCATION

H. W. THOMAS, CHAIRMAN

The Committee on Medical Education, with all members present, met with the Liaison Committee of the Pulaski County Medical Society and Dr. Lawrason, Provost for Medical Affairs, in the Marion Hotel on Sunday, April 22, 1956, at 3:05 p. m.

The purpose of this meeting was to discuss proposed changes in classification of patients who receive treatment at the Medical Center according to their income. This problem had previously been discussed by the Pulaski County Medical Society and its Liaison Committee and they had endorsed the proposed changes. It was pointed out that 96 per cent of the University Hospital in-patients were medically indigent and that the remaining 4 per cent represented those patients referred by practicing physicians over the State for specific reasons.

It was further pointed out that effective July 1, 1956, when the new contracts are signed, no private practice will be done by full time faculty members at the Medical Center.

The proposal of Dr. Lawrason relative to changes in patient income classification, which had previously been approved by the Pulaski County Liaison Committee was approved unanimously by the Committee.



President-Elect T. Duel Brown accepts the office of president-elect. Seated on the rostrum are (left to right) Past Presidents R. C. Dickinson, Euclid Smith, Joe Shuffield, H. T. Smith, S. J. Allbright, and R. B. Robins.

A brief discussion of a desirable general practice residency training program was then held and it was emphasized that there is an acute need for better hospital training for medical school graduates contemplating entering general practice, and that present general practice residency programs do not adequately meet that need.

It was reported by the Pulaski County Medical Society that there is an excellent attitude of cooperation between the doctors of Pulaski County and the administration of the Medical Center.

The Committee on Medical Education wishes to call this to the attention of the House of Delegates.

There being no further business the meeting was adjourned.

RESOLUTIONS

GOVERNOR'S ADVISORY COMMITTEE ON EDUCATION

The Governor's Advisory Committee on Education, established on January 18, 1956 as a successor to the State Steering Committee on the White House Conference on Education, is a widely representative group of professional educators and interested laymen. It has in its membership the president of the Arkansas Medical Society, two other physicians and two physicians' wives.

At the time of its organization, the GACE was given the following specific charge by the Governor: "To ascertain and analyze the facts about our present education program, and on that basis to plan and execute such steps as are necessary to develop in detail the kind of educational program which we must have with specific recommendations as to how this program can be achieved."

Following through on that charge, the GACE has employed a professional consultant to direct it in sub-committee studies necessary to ascertain and analyze the facts and has begun a comprehensive program of study and action.

We express our complete confidence in the interest, integrity, and leadership of this committee, and we commend it for the thoroughness and conviction with which it is undertaking the task of raising the educational status of Arkansas. As an organization interested in the mental and physical health of all Arkansans (this presumes education) Arkansas Medical Society pledges to the Governor's Advisory Committee on Education its full support and cooperation.

FORD FOUNDATION

The Arkansas Medical Society, in annual meeting assembled, extends its deep and lively sense of gratitude to the Ford Foundation, which we and all our people feel for the help and inspiration we receive in our daily lives, on account of the generous gift to many of our hospitals.

The Ford Foundation has made a real contribution to the well-being of our people, and the inspiration thus derived will result in an increased measure of progress in all activities pertaining to health for our people.

APPRECIATION

The Arkansas Medical Society, through its House of Delegates, extends warmest thanks, and a deep and lively sense of gratitude to the Pulaski County Medical Society, and the individual members thereof, for their hospitality and constant care to anticipate our wishes during the 80th annual session.

ACHROMYCIN^{*}

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The prevention and control of cellulitis, abscess formation, and generalized sepsis has become commonplace technique in surgery since ACHROMYCIN has been available. Leading investigators have documented such findings in the literature.

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As a prophylactic and as a therapeutic, ACHROMYCIN has shown its great worth to surgeons, as well as to internists, obstetricians, and physicians in every branch of medicine. This modern antibiotic offers rapid diffusion and penetration, quick development of effective blood levels, prompt control over a wide range of organisms, minimal side effects. There are 21 dosage forms to suit every need, every patient, including

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dry-filled sealed capsules

¹Albertson, H.A. and Trout, H. H., Jr.: *Antibiotics Annual* 1954-55, Medical Encyclopedia, Inc., New York, N.Y., 1955, pp. 599-602.

²Prigot, A.; Whitaker, J. C.; Shidlovsky, B. A., and Marmell, M.: *ibid*, pp. 603-607.



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ACHROMYCIN ACHROMYCIN

We wish for you, and we could wish you nothing better, many years of enjoyment of the good life which you portray so well.

In token of that wish and of our affectionate gratitude to you, we have asked a few of your steadfast friends among us, on behalf of us all, to sign this greeting.

PRESS RADIO AND TELEVISION

The Arkansas Medical Society received courteous, careful and fair consideration from the Press, the Radio and Television, during our sessions. Their cooperation has done much to make our annual meeting a success.

The Marion Hotel, as is customary with them, has acted as splendid hosts, and has made arrangements for our every comfort.

The hospitality of the citizens of Little Rock is traditional, and has never been shown to better advantage than during our 80th Annual Session.

To all these agencies and groups, we tend our best thanks.

FIFTY-YEAR CLUB BREAKFAST

April 24, 1956

It is not a matter merely of convention but a real pleasure to offer our thanks and appreciation to the managers of the Arkansas Medical Society for their thoughtfulness and generosity for the nice meal and opportunity it gives this group or club the chance to assemble each year for a most enjoyable hour.

I am sure each member looks forward to and appreciates this feature of the state society.

I want to contradict an old aphorism that says, "No one originates anything, we build upon foundations laid long before and climb by stepping in the foot prints of those who have preceded us. No one remembers who showed the way."

We want to believe that our parent society is the originator of this plan that each Fifty-Year Doctor appreciates and enjoys so much.

We also want to honor and pay homage to Mr. C. Hamilton Moses, the man with the Encyclopedic mind, who said so many nice things at this meeting, not only for us, but also, for the enviable position he has created for himself in the hearts of all who know him best.

We hope that his good health may continue for a long time to come, and that as old age overtakes him, he will have the satisfaction and joy of viewing the many great good things he has accomplished in his busy and useful life.

A short but impressive memorial service was said by Dr. Mock for the fifteen departed members.

Twenty-one members were present.

The following officers elected. Drs. W. E. Hamil of Pocahontas, president; J. C. Gilliam, Des Arc, vice president; J. H. McCurry, secretary for life.

J. H. McCurry, Secretary.





MRS. L. GARDNER

RUSSELLVILLE

President, Woman's Auxiliary to the
Arkansas Medical Society, 1956-1957

**32nd Annual Session
WOMAN'S AUXILIARY
TO THE ARKANSAS MEDICAL SOCIETY
April 23rd and 24th, 1956**

The Woman's Auxiliary to the Arkansas Medical Society met for the Thirty-second Annual Session in Little Rock, Arkansas, April 23rd and 24th.

Mrs. John T. Gray, president, called a meeting of the Executive Board on Sunday evening for a dinner meeting at 6:30 P.M., April 22nd, in the Coach Room of the Marion Hotel. On Monday, April 23rd, the General Session was held in the Continental Room with Mrs. Erner Jones, President of Pulaski County Medical Society, presiding. Mrs. Earle D. McKelvey gave the invocation. Mrs. William Snodgrass gave the welcome address and Mrs. A. J. Forestiere thanked the

hostess club for their hospitality and excellent plans. Mrs. Gray was introduced and took the chair to hear the reports of Officers and Committee Chairmen. Special guests were introduced and among these were our National President, Mrs. Mason Lawson. Following the election of Nominating Committee for 1956-1957 the recommendations of the Executive Board were acted upon. The Auxiliary was proud to announce the gift of \$1,500.00 to the A.M.E.F. for the year. This is an accomplishment we may point to with pride. Several other recommendations from the board were passed without dissenting vote. The

naming of delegates to A.M.A. was left to the incoming president until it could be learned who could attend. After hearing the report of the convention chairman, Mrs. Hoyt Choate, the meeting adjourned for lunch.

Mrs. John T. Gray, president, presided at the luncheon on Monday honoring Mrs. Mason Lawson, President, Woman's Auxiliary to the American Medical Association. Mrs. Lawson brought the most informative and interesting message and gave us the feeling of having shared with her as she went about the nation, working with the A.M.A. The beautiful decorations of Treasure Boxes on each table were done by Mrs. William Snodgrass. We went home with a better understanding of the complete objective of the Auxiliary work. Following the luncheon a tour of the new University Medical Center was made and this was most interesting.

Monday evening at 8 P.M. a social hour with the Pulaski County Medical Society as hosts was enjoyed at the Riverside Country Club.

The Second General Session was opened at 9:30 A.M., Tuesday, April 24th, with Mrs. John Gray presiding. The interesting reports of the County Presidents were heard and the following slate of officers for 1956-1957 read by the Chairman of the Nominating Committee, Mrs. Hoyt Choate, Little Rock, and were elected unanimously.

President.....	Mrs. L. Gardner
President-Elect.....	Mrs. Jack Kennedy
First Vice President.....	Mrs. Gordon Oates
Second Vice President.....	Mrs. Frank Adams
Third Vice President.....	Mrs. A. J. Forestiere
Fourth Vice President.....	Mrs. Kenneth Siler
Recording Secretary.....	Mrs. Erner Jones
Publicity Secretary.....	Mrs. L. A. Whittaker
Corresponding Secretary.....	Mrs. Louis Draeger
Treasurer.....	Mrs. Mason Lawson
Historian.....	Mrs. C. W. Garrison
Parliamentarian.....	Mrs. Howard Stern

These officers were beautifully installed by Mrs. Hoyt Choate.

The Tuesday luncheon was a lovely affair honoring Doctor's Day. Mrs. Louis K. Hundley, past president of the Woman's Auxiliary to the South-

ern Medical Society, gave a very interesting and entertaining talk on "Diseases Common to Doctors." Several doctors attended with their wives. Dr. L. H. McDaniel, Dr. Fount Richardson, Mr. A. P. Lorenz of Southern Medical Society and Mr. Paul Schaefer were special guests of the luncheon.

Immediately following the luncheon the Post Convention Board Meeting was held in the Continental Room with thirty-eight members present, Mrs. L. Gardner, president, presiding. There was introduction of new members and workshop conducted by Mrs. V. T. Webb on Treasurer's duties, Mrs. Louis K. Hundley gave discussion on By-Laws, and Mrs. Ben Means on Public Relations. Each member of the Board was presented with a copy of "Convention News" which included names and addresses of all new committee chairmen, officers and county presidents for use of each during the year's work. A copy of the By-Laws and Constitution had been prepared for each member. Mrs. L. Gardner presented her ideas for beginning of the year's work, and thanked each graciously for being present.

Mrs. H. King Wade,
Recording Secretary.

DOCTOR'S DAY

1956

To set aside one day as Doctor's Day
Is pleasant gesturing . . . the thought is nice!
But we know every day is Doctor's Day . . .
And posies once a year do not suffice!
The one who lives with him, that Medico,
Can see the killing tempo of his days,
The nights of birth and death that come and go,
His superhuman efforts! In some ways
He IS a sort of God to laymen, one
Who guards the health of men thru all his life.
This dynamo . . . whose work is never done!
But if you doubt he's human, ask his wife.
From first to last, to her he is her man!
To love, protect, and scold! Far from divine!
A man with faults like any other man.
He never knows her prayer, "GOD KEEP HIM
MINE!"

—Vera Blood Fletcher (Mrs. George B.)
(First read at Woman's Auxiliary luncheon April 24, 1956.)

SPONTANEOUS ANTEPARTUM RUPTURE OF UTERUS FOLLOWING PREVIOUS COMPLETE INVERSION*

A Case Report

WM. B. HARRELL, Texarkana, and J. R. RAMIREZ,** Manila, R. P.

Rupture of the uterus is always one of the most serious complications that can confront the physician.

The average incidence of rupture of the uterus in pregnancy is 0.062 per cent.¹ It has been estimated that 50 per cent of uterine ruptures follow cesarean section, 30 to 33 per cent are spontaneous, and 17 to 20 per cent are traumatic.^{3, 4, 7}

Maternal mortality following spontaneous non-cesarean ruptures of the uterus ranges from 44.8 per cent to 75 per cent.^{2, 5} The survival of the fetus in these cases of complete rupture before labor can be accomplished only by preventing the accident.

Excluding ruptures as a result of previous cesarean section scars and direct trauma and perforations of the uterus by criminal abortionists, complete rupture of the uterus before labor begins is rare.⁶

A case of spontaneous antepartum rupture of the uterus following previous complete inversion is presented. We have not been able to find another reported incidence of spontaneous antepartum rupture of the uterus occurring in a patient who had previously been treated for complete inversion of the uterus.

Case Report

Mrs. W. J. S., a 24-year-old housewife, gravida II, para I, registered for prenatal care July 7, 1952. Her last menstrual period was on May 1, 1952, and the expected date of delivery was February 5, 1953. The physical and laboratory examinations on the initial visit were within normal limits.

Her first pregnancy was in 1947, when she was 19 years old. Delivery by outlet forceps at St. Michael's Hospital on May 23 of that year was followed by a severe postpartum hemorrhage. According to the hospital records and our discussion of the case with Dr. J. W. Jones, who attended her, the postpartum hemorrhage was followed by complete inversion of the uterus. A combined abdominal and vaginal manipulation

was used to reposition the uterus. The uterus was not perforated during the procedure.

The prenatal course of her second pregnancy was uneventful until the night of December 11, 1952, when she was admitted to St. Michael's Hospital complaining of nausea, vomiting, and pain in the right lower abdomen.

Examination on Admission. The patient did not appear to be acutely ill. Her blood pressure was 140/80, pulse 120, and temperature 99.4° F. The abdomen was enlarged to that of a seven-month pregnancy, and there was severe tenderness with slight muscular rigidity over the right lower quadrant. The fetal heart tone was not heard.

Pelvic examination revealed a thick cervix which would not admit a finger. There was no vaginal bleeding.

Laboratory studies revealed a hemoglobin of 9 grams and a leucocyte count of 30,200. The urinalysis was negative.

The patient was seen in consultation with Drs. W. D. Dawson and J. W. Jones. Both felt that an appendectomy should be performed.

Surgical Operation. The patient's blood was typed, crossmatched, and whole blood transfusion was started. A McBurney incision was used to open the abdomen. The appendix was found to be normal and fetal parts could be palpated easily through the unruptured membranes which presented in the operative field. The incision was closed, and a right paramedian incision was used to reopen the abdomen. On opening the peritoneum, a seven-month fetus was found to be free in the abdominal cavity. The fetus was not viable. Further examination revealed a complete rupture on the posterior uterus extending from the fundus downward through the lower uterine segment (Fig. 1) The placenta was hanging in the lower angle of the rupture. There were approximately 1,000 cc. of blood in the abdomen. A subtotal hysterectomy was done, and the patient received 2,000 cc. of blood during and immediately after the procedure. She left the operating room in good condition.

*From the St. Michael's Hospital, Texarkana.

**Exchange Program Resident in General Practice.
Received for publication April 3, 1956.

The postoperative course was uneventful, and the patient left the hospital on the seventh postoperative day.

Pathological Report

GROSS: The specimen consisted of a supracervically amputated uterus and a placenta. The uterus measured 11.6 by 7.9 by 5.7 cm. The serous surface was smooth, pink, and glistening. The uterus had been opened along its posterior surface in a rather irregular line extending all the way to the apex of the fundus. The ragged appearance of this opening was consistent with a diagnosis of a rupture. A section was taken from the edge of the opening. The endometrium was rough and red. A few strands of what appeared to be placental tissue still adhered to the distal portion of the uterine cavity.

The placenta was somewhat fragmented. It was 27 by 14 by 1.8 cm. Approximately one-half of the placenta was somewhat hemorrhagic on its maternal surface. The remainder was pink and relatively bloodless. The hemorrhagic portion was assumed to be the part which was extruded from the uterus. The fetal surface of the placenta appeared normal. The cord was 1.5 cm. in diameter and seemed to be about the size which would be expected of a fetus near term.

MICROSCOPIC: Section through area showed what happened to be fibrinopurulent exudate on the surface of the rupture site. This exudate contained many neutrophils and a few lymphocytes. There were a few lymphocytes scattered through the myometrium in this immediate area. The deciduous endometrium adjacent to this area also showed in some places on the surface a small amount of fibrin which contained a few neutrophils. The chorionic villi were the small type with syncytial knots usually seen at full term. The size of the placenta grossly also seemed to indicate a placenta which was near term.

PATHOLOGICAL DIAGNOSIS: Ruptured pregnant uterus with placenta.

Comments

Occasionally a patient will not present the classical picture of shock and hemorrhage that every physician looks for in making a diagnosis of ruptured uterus. It is well to be aware of the possibility of ruptured uterus in any pregnancy where the patient has a history of previous surgical procedure on the uterus and unexplained abdominal pain. Although the case presented was a coopera-

tive patient and under very close observation, we failed to make a correct diagnosis of uterine rupture on admission to the hospital.

Summary

1. A case of spontaneous antepartum rupture of the uterus following previous complete inversion has been presented.
2. Treatment consisted of whole blood transfusions and hysterectomy.
3. The patient made an uneventful recovery.

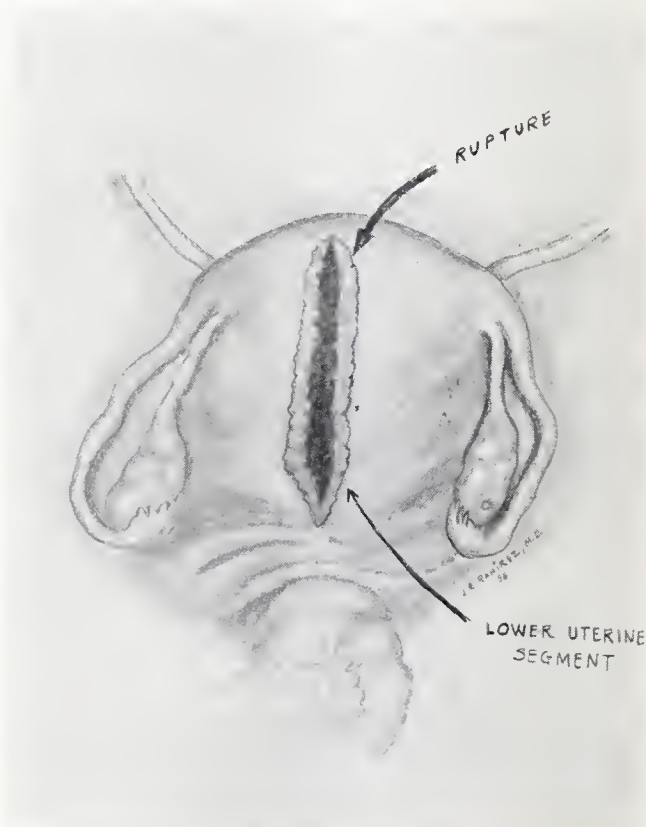


Fig. 1. Site of rupture in the uterus through which the fetus and the placenta were extruded.

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THE ACUTE GALL BLADDER

J. W. DORMAN, Springdale

The treatment of acute cholecystitis still remains a highly controversial subject but there has been a gradual change from conservatism to the early employment of surgery with considerable reduction in mortality and morbidity.

I believe that acute conditions of the gall bladder should properly be considered an acute abdominal emergency and surgical treatment undertaken as early as is consistent with the patient's general condition.

History

Walton of England in 1913 proposed early operation for acute cholecystitis and precipitated considerable discussion of the surgical management as relates to the optimum time for surgery. In 1933 Deaver, Haggard, Lyons, E. A. Graham and others advocated delay in instituting surgery while Alexander, Phillips, Heuer, Halsted, Stone, H. F. Graham and others advocated early surgery.

It is believed "early" operation should include cases operated within 48 to 72 hours, after onset, "intermediate" operations those operated between 72 hours and complete cessation of clinical manifestations, and "late" operation those cases operated after complete cessation of objective and subjective symptoms. I would prefer to institute surgical treatment as soon as the diagnosis can be made, the patient's general condition evaluated and chemical and fluid balance restored.

Halsted & Heuer in 1910 performed a cholecystectomy in the acute stage when cholecystostomy was the practiced procedure and the patient had an uneventful postoperative recovery. Heuer, since 1922, has advocated early surgery. Early surgery should afford ideal treatment wherein the operation could be carried out before the development of marked inflammatory changes and before the development of serious complicating factors which greatly increase the morbidity and mortality. Surgery in the later stages is more difficult, the hospital stay prolonged and postoperative discomfort increased.

It is encouraging that early operation is now advocated by the majority surgeons. This has been brought about by a thorough study of the clinical manifestations in relation to pathologic changes.

Pathology

Crile, Clagget, Heuer and others have emphasized the inability to accurately determine the progress of the pathologic process by any present day clinical or laboratory methods. The ability to evaluate clinically the type or stage of cholecystic disease is not well developed and although the operative mortality in advanced acute cholecystitis is high, it is less than that following deferred diagnosis. The clinical process does not subside in about 35% of cases and these must be operated later. Some 25-30% become progressively worse and in only about 37% does the process subside. Inability to follow the pathologic process accurately, further proved by the fact that perforation occurs in 6-8% by Bachhuber, to 13.8% by Clagget, to 20% by Heuer. The pathologic changes in most cases of acute cholecystitis follow the impaction of a pre-existing gallstone in the cystic duct or ampulla, compromising the circulation and resulting in an acute inflammatory process which is characterized by edema in the early stages and subsequently ischemia and gangrene.

There is a difference of opinion regarding the bacteriology, the route of infection, and the role of imprisoned bile as etiologic factors of acute cholecystitis. Womack and Hoffner called attention to the fact that bile itself sets up an inflammatory process similar to that seen in acute cholecystitis. It produces a marked increase in capillary permeability in the region where it is placed. This is first evidenced by edema and later by diapedesis of red blood cells, ecchymosis and subsequently by actual gangrene. This reaction is associated with a cellular reaction which is chiefly lymphocytic as very few polymorphonuclear cells are found. The severity of the reaction produced by bile seems to be in direct proportion to the concentration of cholesterol and bile salts. Accordingly, when bile is imprisoned in the gall bladder by obstruction of the cystic duct, an acute inflammation may be produced presenting a characteristic pathologic picture of acute cholecystitis. Experimentally, complete obstruction of the cystic duct in a dog did not produce inflammation of the gall bladder if the imprisoned bile was aspirated and replaced by an equal volume of isotonic saline solution. However, if bile was not aspirated inflammation did occur. If the cystic duct was not obstructed injection of concentrated bile failed to produce inflammation. Womack &

Hoffner concluded from these studies that the three important factors are: 1, obstruction of the cystic duct; 2, the damaging action of bile on the gall bladder wall, and 3, the secondary presence of bacterial infection which would be superimposed on the chemically damaged tissue.

Saint advanced the theory that it is an obstructive phenomenon caused either by a stone or inflammation, or both, which by exudation and transudation increases the intravesical pressure and causes tension gangrene at the fundus. Andrews making serial section studies of the acute gall bladder found a definite correlation of the condition in the cystic duct with pathologic changes in the gall bladder. The edema is confined almost entirely to the subserous layer. Therefore, although the exact pathogenicity is not understood the facts known indicate an element of obstruction with venous distension and an outpouring of lymph into the subserous space. In acute inflammation the wall of the gall bladder is thickened, the serous surface congested and may be covered with a fibrinous exudate. Bacteria are usually *escherichia coli*, *clostridium perfringens*, *streptococcus*, *staphylococcus*, *bacillus typhosus*, *pneumococcus* or *influenza*. Gall stones are usually present, some authors report as high as 95%.

Diagnosis

Acute cholecystitis may occur at any age but is most common in the middle age group. The diagnosis of acute cholecystitis is usually not difficult. The onset is frequently ushered in by biliary colic, severe in nature and caused by impaction of a stone in the cystic duct or the ampulla. The colic is accompanied by nausea, vomiting, chills, fever and frequently abdominal distension. The gall bladder distends rapidly and is frequently palpable. Jaundice is present in 15-20% of the cases due to common duct stone or to edema of common duct and periductal tissue. Leukocytosis is usually present. Most cases give previous history of gall bladder trouble. The differential diagnosis must exclude coronary thrombosis, perforated gastric or duodenal ulcer, carcinoma of the liver or hepatic flexure of the colon, acute pancreatitis, liver abscess, right lower lobe pneumonia, right renal disease, appendicitis and diverticulitis. X-ray may be helpful in diagnosis.

Treatment

Cholecystectomy is the operation of choice and is done from the cystic duct to the fundus in most cases. However, it may be necessary in certain cases to remove the gall bladder from the fundus

up to the cystic duct. Cholecystostomy, however, may be life saving in some cases. The morbidity and mortality assigned to cholecystostomy lie in the fact that this operation has been employed to rescue the patient who has progressed unfavorably under the so-called conservative regime. It may be life saving particularly in elderly patients as well as those with co-existing liver damage or cardio-renal diseases, since it is easy to accomplish, requires less time, relieves obstruction and often can be done under local anesthesia. Stones in the common duct are often found in acute cholecystitis. In large groups of cases about 16% are found to have common duct stones which closely parallels the occurrence in chronic calculus gall bladder. Common duct stones should be searched for just as carefully in the acute gall bladder as in the chronic uninflamed gall bladder.

The following are indications to explore the common duct: 1, jaundice is a positive indication but in over 1,000 cases at Lahey Clinic, 47% of those who had a common duct stone had no jaundice; 2, dilated, or thickened common bile duct; 3, small stones in the gall bladder; 4, positive or suspicious findings on palpation; 5, sediment in bile aspirated from the common bile duct; 6, acute or subacute pancreatitis, and 7, non-calculus gall bladder with biliary tract symptoms.

The influence of antibiotic therapy on morbidity and mortality in acute gall bladder conditions has been of great value in recent years. They have helped particularly in the perforated gall bladder, pericholecystic disease, bile peritonitis and subphrenic abscess. These agents affect the course of the disease but if surgical intervention is carried out early, morbidity and mortality will continue to be lowered.

Case Presentation

In this paper 12 cases of acute cholecystitis occurring in 1954 and 1955 at the Springdale Memorial Hospital are presented. They were submitted to operation and diagnosis proved by careful pathologic examination. In this group there were two males and ten females which does not quite represent the usual ratio between male and female of 1-2. There were no deaths.

Age	Incidence	Cases	Complications	Stones
20-30 years	1	1	Acute gall bladder	Common duct stone & gall stones
30-40 years	1	1	Cholesterosis	No stones
40-50 years	2	2	2 Gangrenous	2 Gall stones
		2	2 Perforated	
50-60 years	4	4	1 Empyema perforated with peritonitis	1 Common duct stone
			1 Gangrenous	4 Gall stones
60-70 years	1	1	1 Gangrenous perforated	1 Gall stones
70-80 years	2	2	2 Perforated	2 Gall stones
		1	1 Gangrenous	
80-90 years	2	2	2 Acute gall bladder	1 No stones
				1 Gall stones

It is interesting to note that in this group there were an unusual number of perforations (six or 50%), even in those operated early. Cholecystostomy was performed in two cases and cholecystectomy in the remainder. The common bile duct was explored in 3 cases or in about 25%. Common duct stones were found in two cases.

Gangrene occurred in five cases and empyema in one with generalized peritonitis. Only two of these cases had no previous history of gall bladder trouble. Perforation occurred in one case in which frank gangrene did not occur. Empyema occurred in a case operated within 24 hours after the onset of symptoms. A majority of these cases were operated within 48 hours after onset of symptoms which shows perforation often occurs early. One case refused early surgery but perforated three weeks later and immediate surgery was done. One case which had cholecystostomy at first operation, three months later returned to the hospital and had a cholecystostomy and choledochostomy with an uneventful recovery. There were no deaths.

Conclusions

1. Acute cholecystitis is an acute surgical emergency in which early surgery permits thorough operation with less operative risk and lowered morbidity and mortality as well as economic saving to the patient. 2. Common duct stones should always be searched for because of their relatively high occurrence. 3. Cholecystostomy has a limited indication in the treatment of acute cholecystitis but is a valuable surgical procedure in some cases. 4. There is no direct parallelism between the clinical symptoms and the course of the pathologic process. 5. A large percent of patients with acute cholecystitis had at operation, gangrene and perforation of the gall bladder. 6. The operation of choice is cholecystectomy. 7. A majority of these cases present history of previous trouble. 8. Antibiotics are of great value particularly in complications.

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Obituary

ZACHARIAH TAYLOR SHEID, 81, a retired physician of Norfolk, died April 26.

Dr. Sheid, a native of Izard County, was a physician in the Ozark Mountains 50 years before retiring in 1952. When he retired, a special program was held in his honor at Norfolk and was attended by doctors from throughout the state.

He was a veteran of the Spanish-American War and was a member of the Official Board of the Norfolk Methodist Church.

He is survived by a son, a daughter, five grandchildren, and two great-grandchildren.

Interment was in Norfolk Cemetery.

THINGS TO COME

ARKANSAS ACADEMY OF GENERAL PRACTICE

Little Rock — October 17-18, 1956

SOUTHERN MEDICAL ASSOCIATION

GOLDEN ANNIVERSARY MEETING

Washington D. C. — November, 1956

WOMAN'S AUXILIARY

Mrs. Mason G. Lawson, President of the Woman's Auxiliary to the American Medical Association, is winding up a year of whirlwind activity. She is climaxing many thousand miles of travel with a tour through the East, starting with a meeting of the South Carolina Medical Association, at Myrtle Beach, May 17, and ending with the first day's session of the AMA in Chicago on June 15.

— ★ Editorial ★ —

Thumbing through collections of medical material written on political questions during the last three months, we have encountered a spate of essays on how wonderful it was to have the Secretary of Health Education and Welfare testify to the Senate Committee against HR 7225.

While it is true that Secretary Folsom's testimony was directed against part of the bill, the facts are that he failed to make more than a segmental stand against the bill which, in toto, is a part of the program of the Planned Society performers to rip apart our American heritage.

The great acclaim given Mr. Folsom from AMA headquarters and other places, may have been generated to cover up the obvious deficiencies in Folsom's report to the Senate Finance Committee, or it may have been spread out to gather political wool over the eyes of physicians, and impress them that medicine is getting a square deal out of Mr. Eisenhower's cabinet, and out of his government. If it was for either of these reasons, the acclaim was unjustified, and unfounded. In our reportorial capacities we have tried to stick to facts, and we advise others to do the same.

The facts are that Secretary Folsom testified for HR 7225 in a part of its provisions. He opposed the cash disability program, but spoke for universal coverage under OSAI. He opposed the lowered retirement age for women, but said he considered OSAI as "financially sound," and that the new coverage would not jeopardize its financial situation. He further testified against tax increases for the socialized security, but commented that he failed to see why physicians object to inclusion in the "security" program.

The AMA has stood out against universal coverage, has argued clearly that OSAI is neither insurance, nor is it financially sound, and has fought consistently against being forced on the SS rolls.

So Folsom's batting average in our league is something around 50 per cent, and unless some improvement is shown, it behooves us not to go spreading around among our colleagues that all is well, Folsom and Ike are against socialization of the physician. We'd better look at the facts, and begin to build up candidates for our lawmakers' seats, that will not ruin the heritage of liberty that has been ours.

THE ANNUAL SESSION

Probably the outstanding improvement in the 80th Annual Session of the Arkansas Medical Society was in the increase in quality and quantity of the scientific exhibits. If one of the fundamental reasons for existence of a Medical Society is to keep its members educated and refreshed in medical matters, then this year's Scientific Exhibit was an important phase of our work.

Without pointing the finger at any one exhibitor, suffice it to say that all of them are a credit to their sponsor, and are of high scientific interest and value. By these things we are kept abreast of what's new in therapy, physiology, and in many phases of medicine. We are proud to realize that private physicians, GP's, specialists, and teachers, joined the various medical institutions in preparing displays.

We are by no means critical of our essayists in this report. An excellent program was carried out, and an excellent attendance provided for our guest speakers. Hospitality was spread for the lighter hours of the meeting, offered by more than a score of the Pulaski County members.

By all these tokens we conclude that the 1956 session was superior in many ways, and inferior in none, to the long list of successful meetings that it has been the privilege of Arkansas physicians to attend through these many years.

Arkansas

TRAVELING

And Clipping Bits Here and There

Gerald Barton, Acting Director, Division of Tuberculosis Control, State Board of Health: "One-third of the deaths from tuberculosis in Arkansas last year were never known as living cases."

Forgive the past but don't forget it.—Selected.

"When that day comes that every family in America can have its own family physician that can come into his home, that he can love and trust, then the millenium shall come, the lamb and the lion shall lie down together and a little child shall lead them."—R. L. Sanders, Memphis, 1956.

Our Best Lobby

Socialism is an insidious disease that thrives on apathy, sloth and corruption. The fight for Freedom is eternal, and that fight must be led by peo-

ple of perspective and courage. The Doctor, who provides the most personal and humane of services, is in a unique position of opportunity and responsibility for the cause of Freedom.

Wire your congressman to kill some bills? Yes, for many bills are dangerous and should be opposed. But that is not enough. A purely negative approach will always end in defeat. Our best lobby is with our patients.

Tell our patients that socialized medicine is bad? Yes, because it IS bad and it would be much worse if it were universal. Socialized medicine is the bait that dictators use to catch the unwary. But that is not enough. We must demonstrate in our everyday practice that Medicine with Freedom is best and that it does provide for ALL people. We must not rub people the wrong way. We must teach them to understand our problems and theirs. For example, home calls are inefficient, and the quality of service in the home is not up to modern, scientific standards. Still, there are times when the Doctor must make home calls, and we must patiently educate our patients to the advantage of going to the Doctor and his equipment.

Meet the challenge! We must prove to the ordinary man that Medicine with Freedom extends medical care to ALL people—rich man, poor man, beggar-man, thief! And this, my friends, is most important of all. Let us not forget. It is one of the oldest and best traditions of the profession that the Doctor renders his service always as if it were free—and accepts the fee afterward. It is good for a man's soul to give, and he whose prime motive is financial gain is not suited for Medicine.

Let us not neglect our patients. They are our best lobby.—W. E. Lockhart, M.D., Alpine, Texas.

"I especially appreciate the articles which focus our attention on our responsibilities and privileges as members of the community and our relation to freedom which, sad to say, is being shorn of more of its locks in this age of bureaucracy. How true it is 'The price of liberty is eternal vigilance' and it appears that many of us are in siesta."—George A. Thompson, letter to Northwest Medicine.

He governs best that governs least.—Thomas Jefferson.

Ford Foundation Announces Matching Grant Program

Physicians who have diligently worked for the American Medical Education Foundation will be interested in the April 15 announcement by H.

Rowan Gaither, Jr., president of the Ford Foundation, of a ten million dollar program of matching grants to the National Fund for Medical Education. Ford Foundation grants will be made on a matching basis over a five-ten year period with a maximum limit in any one year of two million dollars.

Last year the National Fund—which distributes monies raised by the AMEF along with contributions from industry and the general public—received \$2,147,000 in unearmarked funds for distribution to the nation's medical schools. Of this amount, \$422,812 came from the medical profession through the AMEF. Under the Ford Foundation formula, if these receipts are of equal magnitude in 1956, a Ford grant totaling 70 per cent of this amount or \$1,503,486 would be made. All contributions in excess of the 1955 total would be matched dollar for dollar, subject to the annual maximum of two million dollars.

Grants will be paid to the National Fund on a sliding scale in a program that could last up to ten years but might be accelerated to completion in five years depending upon the rate at which additional contributions are developed.

FROM 535 NORTH DEARBORN

New "Medical Horizons" TV Series Planned For Next Season

Live reports on current developments in medical progress will be brought to the American people over a greatly expanded television network next season. "Medical Horizons," the popular television series, will again be presented by Ciba Pharmaceutical Products, Inc., in cooperation with the American Medical Association. Beginning Sunday, September 9, "Medical Horizons" will be seen at 4:30 p. m. EDT each Sunday over 85 stations of the American Broadcasting Company television network.

The show format will remain the same.

Commenting on the new 39-week series, T. F. Davies Haines, president of Ciba, said, "We trust that the greatly expanded coverage and continuity of the new series will inspire increased confidence in the American medical profession. We plan to have programs on advances in common everyday problems in medicine as well as on major diseases which as yet have not been fully conquered."

Guides for Industrial Nurses

Physicians in charge of industrial medical departments have found the AMA Council on Indus-

trial Health's new booklet on guides and procedures for industrial nurses to be a big time saver. Titled, "Guiding Principles and Procedures for Industrial Nurses," the booklet contains sections on qualifications, functions, relationships and responsibilities of industrial nurses as well as standard procedures to follow. This 36-page booklet allows space for the physician to insert preferred or alternative instructions.

Since the pamphlet was first issued in February, more than 15,000 copies have been distributed throughout the country. Single copies are available free of charge from the Council. Quotations on quantity prices may be obtained from AMA's Order Department.

ANNOUNCEMENTS

World Medical Assembly in Havana

The World Medical Association will hold the opening plenary session of its 10th General Assembly in Havana, Cuba, on October 10th, which is Cuban Independence Day. This is the first time that an Assembly has been held in Latin America. The only other meeting held in the Western Hemisphere was the 1950 Assembly in New York City.

The '56 Assembly will begin with a day of registration on October 9 and sessions will continue through October 14. October 15 will be devoted to an excursion to Veradero Beach.

On October 8 and 9, the Latin American doctors will meet jointly with representatives of The World Medical Association and the International Hospital Association to consider ways and means of improving the hospital standards in Latin America.

The morning session of the Assembly on October 11 will be devoted to consideration of problems of medical publications in Latin America, and the Scientific Session will be devoted to two main subjects—cardiology and nutrition.

An Arkansas Conference for the Handicapped has been scheduled for October 9-10 in Little Rock at the Marion Hotel. While the Conference will deal primarily with handicapped children, it will also include the handicapped adult. Plans for the Conference developed following a November meeting held under the auspices of various civic organizations of Arkansas. Several Arkansas physicians will attend.

Complete financial support for the Conference is being furnished by the Nemours Foundation, of

Wilmington, Delaware, a charitable corporation for the furtherance of work with the handicapped child.

The objectives of the Conference are:

1. To evaluate the presently available resources for meeting the needs of the handicapped in Arkansas.
2. To determine the present unmet needs for a program of adequate care for the handicapped.
3. To set the course for a coordinated program for the handicapped in Arkansas.

(Signed) James H. Penick, Chairman.

The American College of Physicians held its Thirty-seventh Annual Session at Los Angeles, Calif., April 16-20, 1956, with a gross registration of over 4,500. Dr. Walter L. Palmer, of Chicago, was inducted as President.

The 1957 Annual Session will be held at Boston, Mass., April 8-12; the 1958 Annual Session will be held at Atlantic City, N. J., April 28-May 2.

The American Congress of Physical Medicine and Rehabilitation

The 34th annual scientific and clinical session of the American Congress of Physical Medicine and Rehabilitation will be held September 9-14, 1956, inclusive, at The Ambassador, Atlantic City, N. J.

All sessions will be open to members of the medical profession in good standing with the American Medical Association.

Full information may be obtained by writing to the executive secretary, Dorothea C. Augustin, American Congress of Physical Medicine and Rehabilitation, 30 North Michigan Avenue, Chicago 2, Illinois.

The 36th annual session of the Southern Pediatric Seminar will be held at Saluda, North Carolina, July 9 to July 28.

It includes a week of Internal Medicine, a week of Pediatrics and a week of Obstetrics and Gynecology. The seminar has proven unusually popular to Arkansas physicians.

The 10th Annual Rocky Mountain Cancer Conference is scheduled for July 11 and 12 in Denver. For reservations write Cancer Conference Committee, 835 Republic Building, Denver 2, Colorado.

TUBERCULOSIS ABSTRACTS

A Review for Physicians

ISSUED MONTHLY BY THE NATIONAL TUBERCULOSIS ASSOCIATION

REPRODUCED FOR ARKANSAS PHYSICIANS BY THE ARKANSAS TUBERCULOSIS ASSOCIATION

"A CHRISTMAS SEAL SERVICE"

TB, GERIATRIC PROBLEM

By JOHN B. O'CONNOR, M.D.

Bulletin, National Tuberculosis Association, January, 1956

The trend towards older patients in our tuberculosis hospitals raises many questions for which there are, as yet, no answers. If, however, the current trend continues, and there is no reason to suspect that it will not, the care and treatment of pulmonary tuberculosis will truly require the services of those experienced not only in tuberculosis but also in the management of the elderly individual.

Only 15 years ago the majority of patients in the tuberculosis hospitals were active, alert young people and the principal problem encountered was that of enforcing some degree of bed rest. At the present time, the majority of patients in tuberculosis hospitals are above the age of 40 years with over one-fifth being above the age of 60 years.

This change in patient age groups has resulted in a different, sometimes depressing, atmosphere in the hospitals. In addition, it has altered the whole medical routine because of the increased incidence of non-tuberculous complications seen in these older age groups. In many patients the tuberculosis seems a complication secondary to a major non-tuberculous condition.

Does this mean that pulmonary tuberculosis has now become a disease of older people? By no means is this true. The answer is that the excellent tuberculosis control work of the past has screened the younger age groups and removed the potential source cases before the disease can be spread, thus reducing the number of new cases among the younger ages. A weakness of the control program has been the lack of cooperation of the older people, many retired or unemployed and not accessible to industrial or group surveys. This is now being corrected by orienting case finding programs toward older age groups and by the routine chest films obtained on general hospital admissions. In our experience the latter source is

responsible for the discovery of the majority of patients with tuberculosis in the older groups.

In Connecticut during the year 1938, 52 per cent of all tuberculosis hospital admissions were under age 30, and only **six per cent** were above 60 years of age. In 1953 only 23 per cent of the admissions were under age 30 and **22 per cent** were above 60 years of age with the males predominating in a ratio of more than four to one. The total admissions of all age groups increased 50 per cent between the two periods but the group above 50 years of age increased about **370 per cent**. Although older men predominate it is significant that more older women are also being admitted.

The older age groups in Connecticut are a known reservoir of infection and make up a large part of our tuberculosis patient population. Where were these patients 15 years ago and what was the state of their health? Were they the infected cohorts with clinically inactive pulmonary disease of those who died of tuberculosis then? Did they succeed in escaping detection only to break down in later years?

This was once an accepted theory, but many of the current older patients have had normal chest X-rays during previous hospitalizations or have had previous survey films which were entirely normal upon review. They have acquired or developed their disease for the first time in the later years of their lives. Years of routine chest X-ray surveying have made it possible to time the development of pulmonary tuberculosis in older age groups. This aspect of routine chest X-ray surveys and their value as a base line for other pulmonary conditions, such as carcinoma of the lung, have been of exceeding value to the physician in the study of pulmonary tuberculosis in the elderly patient.

The problem of treatment in these patients is made difficult by the frequent presence of emphysema, by complicating cardiovascular disease,

and by the inability of many such patients to adjust to hospital life. Therefore it becomes imperative to discover and treat these patients while the disease is in its early stages.

Such methods as surveys of older age groups and routine chest films on all general hospital admissions have been mentioned. All diabetics should have chest films at the time of discovery and repeat films at least annually. Patients with chronic pulmonary complaints should not be dismissed with one normal chest X-ray. If symptoms persist repeat films are indicated. Chronic alcoholics should have frequent chest films since this group, comprised largely of social outcasts and homeless men, has an extremely high incidence of pulmonary tuberculosis. Routine surveys of nursing homes and old age homes will uncover patients with active disease. Age does not protect against active pulmonary tuberculosis. No age group can be considered immune.

Age is not a deterrent to recovery from pulmonary tuberculosis. An elderly patient with few degenerative changes should have no more difficulty in treatment than a younger patient. Such patients have undergone thoracic operations for resection of residual disease with minimal complications. Stability of disease has been achieved in some with prolonged medical treatment. Unfortunately, many of the older patients present themselves with extensive disease and are unable to tolerate any major operative procedures because of non-tuberculous complications.

With antimicrobial therapy and other measures the death rate from tuberculosis has declined dra-

matically in the younger age groups. In the older age groups stabilization of disease often occurs in patients in which complete recovery cannot be obtained, only to have the patient die of a non-tuberculous condition. Occasionally treatment, although arresting the active tuberculous process, results in changes in the lungs which cause a greater work load for the heart and the patient dies in later years of heart failure. Thus, although these patients have had active tuberculosis, their death rate from tuberculosis has dropped and their death can be attributed to other causes.

It is estimated that by 1960, between 13 per cent and 15 per cent of the adult (over age 20) population of the United States will be 65 years of age or older. If these older people continue to be infected with the tubercle bacillus, as they are now, the problem of tuberculosis in this age group will persist and may become more acute.

The successful screening of younger people in the past should be the key to control of disease in the older age group. Admittedly, these elderly people are hard to reach. Education of this group must be pressed vigorously so that they will participate in X-ray surveys. Recovery with the aid of modern treatment must be emphasized in order to eliminate the passive attitude assumed by many elderly people.

Similarly, these older folks must learn that if tuberculosis is detected early they stand an excellent chance of recovery. The best way of finding their disease early is by annual chest X-rays. Perhaps if tuberculosis can be well controlled in this older age group another great step in eradication of the disease will have been taken.



Proceedings of Societies

L. H. McDaniel, Councilor, District Medical Society, Tyronza, was host to a joint meeting of the First, Second and Third Councilor Districts May 24 where he assembled a host of prominent speakers, medical leaders and townspeople to an inspirational meeting. Past President McDaniel was listed as Chairman of Arrangements, though credit for the event is his, entirely.

Prominent guests included Governor Faubus, as well as several Past Presidents of the various Medical Associations. Presidents of the American Hospital Association, The Arkansas Educational Association and other high luminaries were present. Mr. Roy Cullen, philanthropist, of Houston, was an invited guest, and many other leaders in religion, civic and industrial life.

The Mobile Blood Testing Unit is working in Hamburg and Crossett vicinities with the cooperation of and under the auspices of the Ashley County Medical Society.

The Arkansas Heart Association and the Ouachita County Medical Society were joint sponsors of a Heart Institute in Camden, May 31, 1956. The program was as follows: "Pathology of General Heart Lesions," K. R. Duzan, pathologist, of El Dorado; "Diagnosis of Heart Disease from Routine Chest Film," George R. Burton, radiologist, of El Dorado. A consultative-teaching clinic involving 6 to 8 patients representing various stages of rheumatic fever and other cardiac conditions or diseases. Present as resource people for this phase of the program were James E. Doherty, Director of Division of Cardiology; Barney Briggs, Clinical Professor of Pediatrics; and Masauki Hara, Associate Professor of Surgery, Assistant Professor of Medicine, all of the University of Arkansas School of Medicine.

Following the consultative-teaching clinic was a panel discussion of cardiac conditions or diseases with particular reference to rheumatic fever.

The Craighead-Poinsett County Medical Society met in Jonesboro on May 2. Twenty-one members and six visiting physicians were present.

A symposium on headaches was held. Drs. DeSaussure and Schultz of Memphis discussed Neuro-Surgical Aspects and Sam Sanders of Memphis discussed E.N.T. and Allergic Causes.

The Ouachita County Medical Society met in regular monthly dinner session Thursday evening, May 3, 1956, in Camden.

The registered nurses of Ouachita County were guests of the doctors at this meeting and a panel discussion was held on "Better Patient Care Through Coordinated Effort." The program was produced by the staff of the University of Arkansas School of Nursing composed of Miss Julia M. Miller, Dean; Miss Eleanor Sheldon, Chief of Nursing Service; Miss Alice Hagelshaw, Public Health Nursing; Miss Doris Place, Medical-Surgical Nursing; Miss Nell Redwood, Mental Health-Psychiatric Nursing; and Miss Elizabeth Thyng, Operating Room Supervisor.

R. B. Robins, Secretary.

The Urological Section of the Arkansas Medical Society held their semi-annual meeting in conjunction with the annual Arkansas Medical Society meeting in Little Rock May 22. Dr. Harry Spence, Professor of Urology at Southern Methodist University, Dallas, Texas, was the guest speaker.

New officers for 1956 were elected as follows: T. Duel Brown, president; Grady Reagan, vice-president; Ralph Down, secretary and treasurer.

This Arkansas Urologic group was formed, informally, in 1954 and became an informal section of the Arkansas Medical Society in 1955. It holds two meetings a year, one at the time of the annual State Medical Meeting and one during the fall. Its purpose, primarily, is to bring the urologists in the state closer together, both socially and professionally.

Ralph A. Downs, Secretary.

New officers for the 50-Year Club elected at the last Annual Session of the Arkansas Medical Society are: W. E. Hamilton, Pocahontas, President; J. C. Gilliam, Des Arc, Vice President; John H. McCurry, Cash, Life Secretary. Will H. Mock, Prairie Grove, is retiring President.

Jerome S. Levy, Little Rock, presided over the May 3-4 meeting of the Arkansas Tuberculosis Association.

Arkansas Chapter of Trudeau Society Formed

An Arkansas Chapter of the American Trudeau Society was formed on May 4. The Trudeau Society is the medical section of the NTA. Dr. Fred Gray of Little Rock was elected president; Dr. Harley Darnall of Ft. Smith, president-elect; and Dr. W. E. Morris of Little Rock, secretary-treasurer.

A constitution and by-laws were adopted and the chapter will act as advisor on medical affairs to the ATA.

PERSONALS AND NEWS ITEMS

R. B. Robins of Camden appeared as a member of a panel of "Theology and Medicine" in Atlanta, Georgia, on May 14 as a part of the annual meeting of the State Medical Society of Georgia.

Copies of the new AMA Directory are now being received by members. The new edition contains 3,122 pages, and lists information on 240,638 physicians in the United States, its dependencies, and Canada. It also lists American graduates temporarily located in foreign countries. Since the 1950 Directory, more than 250,000 changes of address have been recorded in the files of the Directory-Biographical Department, 46,348 names have been added, and 24,225 have been deleted because of death, with an additional 1,172 deleted for other reasons.

In the 1950 Directory, the total number of physicians listed in the United States was 201,277; in the 1956 edition, the number is 218,061, a gain of 16,784, or an average yearly gain for the past six years of 2,797. For Canada, the 1956 Directory lists 17,906 physicians, a gain of 3,310 over the 1950 total of 14,596, or an average yearly gain of 551.

The Pacific States, as in 1950, show the largest increase in physicians for 1956, with a gain of 23 per cent over the 1950 figures; the South Atlantic and Mountain States show gains of about 16 per cent, and the Central, Middle Atlantic and New England States show small gains. California leads in the number gained, with 20,763 physicians in 1956 as compared with 16,668 in 1950, a gain of 24.6 per cent. Florida, showing a gain of 49.8 per cent, now has 4,530 physicians as compared

with 3,025 in 1950. Texas shows a gain of 1,026 physicians; Ohio a gain of 990; Michigan, 963; and New York, 934. Among the smaller states showing a substantial increase in the number of physicians are Arizona, New Mexico, Oregon, and Utah. Slight losses in the number of physicians are indicated in Arkansas, Illinois, Iowa, Missouri, Vermont, and West Virginia, in the new volume.

Robert F. McCrary addressed the Spa Catholic Men's Club in April on "Catholic Action in Everyday Life."

Mrs. Elizabeth Watts is new President of the Ouachita County Medical Assistants Society.

Past President L. H. McDaniel addressed the Rotary Club at Fayetteville, April 26. He was chief speaker at the Pre-Med Club at the University of Arkansas, on the same day.

Remember the Petit Jean Conference, June 16-17.

George W. Rodkey has moved to Arkansas to take over duties as head of the hospital medical staff at State Sanatorium. He comes from Firland Sanatorium in Seattle, Washington, where he had been medical director for three years. A native of Washington, Dr. Rodkey graduated from Whitman College at Walla Walla and from Wayne University School of Medicine in Detroit. His wife, Dorothy, is introduced to Arkansas for the first time. They have three children.

K. W. Cosgrove, Little Rock, and Mrs. Cosgrove have just returned from a vacation in Hawaii.

City officials of North Little Rock are conducting a hospital survey of their area.

John R. Wesson has opened offices in Mineral Springs for a general practice. He is a native of Nashville and a graduate of the University of Arkansas Medical School.

Edgar J. Poth, Galveston, Texas, was guest speaker at the post-graduate course in surgery, at the University of Arkansas School of Medicine, May 14-15-16.

IMPORTANT RESEARCH CONTRIBUTION

Searle Introduces:

A Practical New Steroid for Protein Anabolism

Nilevar*

(BRAND OF NORETHANDROLONE)

PROTEOGENIC EFFECTIVENESS • The newest Searle Research development, Nilevar, exerts a potent force in protein anabolism. Yet it is without appreciable androgenic effect (approximately one-sixteenth of that exerted by the androgens).

Investigations with Nilevar show that nitrogen, potassium and phosphorus are retained in ratios indicating protein anabolism. Nilevar is thus the first steroid which is primarily anabolic and which provides a practical means of meeting the numerous demands for protein synthesis.

NILEVAR IS ORALLY EFFECTIVE • Clinical response to Nilevar is characterized not only by protein anabolism but also by an increase in appetite and an improved sense of well-being.

SAFETY AND PRECAUTIONS • Nilevar has an extremely low toxicity. Laboratory animals fail to show toxic effects after six months of continuous administration of high dosages. Nilevar should not be administered to patients with prostatic carcinoma. Nausea or edema may be encountered infrequently.

DOSAGE • The daily *adult* dose is three to five Nilevar tablets (30 to 50 mg.) but up to 100 mg. may be administered. For *children* the daily dose is 1 to 1.5 mg. per kilogram of body weight. Individual dosages depend on need and response to therapy. Nilevar is available in 10 mg. tablets. G. D. Searle & Co., Research in the Service of Medicine.

INDICATIONS:

Nilevar is indicated in the vast area of surgical, traumatic and disease states in which protein anabolism is desirable for hastening recovery. The specific indications are:

1. Preparation for elective surgery.
2. Recovery from surgery.
3. Recovery from illness: pneumonia, poliomyelitis and the like.
4. Recovery from severe trauma or burns.
5. Nutritional care in wasting diseases such as carcinoma, tuberculosis.
6. Domiciliary care of decubitus ulcers.
7. Care of premature infants.



*Trademark of G. D. Searle & Co.

SEARLE

Jack M. Irvin, Sheridan, was a patient in a Little Rock hospital early in May. He is now back at his office which was remodeled during his absence.

Peter Bogy, a high school student from Little Rock, was one of the National winners in the American Association of Physicians and Surgeons' Contest which ended in April, 1956.

The following doctors attended the meeting of the Southwestern Surgical Congress at Tucson, Arizona, April 16, 17 and 18, 1956: J. W. Dorman, Springdale; Jeff Baggett, Prairie Grove; Jeff Southard, Fort Smith; Louis P. Good, Texarkana; James Growdon, Little Rock; Karlton Kemp, Texarkana; Martin Hawkins, Jr., Searcy; F. M. Lockwood, Fort Smith; F. H. Krock, Fort Smith; R. W. Pickett, Texarkana; Alfred Hathcock, Fayetteville; J. P. Price, Jr., Monticello; J. Harry Hayes, Little Rock; Clarence A. Bishop, Little Rock; Joe Rushton, Magnolia.

BOOK REVIEWS

Christopher's Textbook of Surgery: Editor, Loyal Davis, M.D., Chairman of the Department of Surgery, Northwestern University Medical School. 6th Ed., pp. 1484, illustrated. 1956. \$15.50. W. B. Saunders Company, Philadelphia.

This well-known book is, basically, exactly what its title designates—a textbook, and this latest edition bears out the reputation of excellence achieved by previous editions.

It includes thorough coverage of the basic principles in anatomy, pathology, surgery, and surgical diagnosis. The discourses on treatment are clear and up-to-date; and it includes some considerable illustrated discussions of surgical anatomy and surgical technic in addition to its coverage of general principles of surgical treatment.

It includes fairly complete coverage of the entire human body, generally, and by organs and systems; and its contributing authors are of known eminence and proven ability in their respective fields.

It can be recommended as a very excellent textbook for medical students, and an equally excellent reference and study volume for the practicing surgeon.

W. J. Butt

The Yearbook of Modern Nursing: Edited by M. Cordelia Cowan, foreword by Mary M. Roberts. G. P. Putnam's Sons, New York, 1956. 446 pp. \$5.95.

A source book of excellent articles, both published and unpublished, written during the past year and showing progress and trends in nursing. More than 150 nurses, educators and specialists and representatives from nursing organizations, national and international, have given generously of themselves in reviewing, selecting and organizing material for this important work. This book contains original writings, reference lists and digests covering a number of fields. There are numerous annotated bibliographies,

also, a directory of organizations and agencies of importance to nursing. The book is well indexed. An excellent reference book for libraries.

Julia E. Miller

Bellevue Is My Home: Salvatore R. Cutolo, M.D., Deputy Medical Superintendent, Bellevue Hospital, New York. Pp. 317. 1956. \$4.00. Doubleday & Company, New York.

This is a story including the human interest stories of a great hospital that has been a fountainhead of medical service for more than a hundred years. It is factual, entertaining, and to a mild extent, philosophical. Recorded by a physician whose whole professional life has been connected with the institution, it is easy to know that the best foot is put forward, and that it is an historical document of authenticity and interest. Recommended for leisure reading.

Electrocardiography: Fundamentals and Clinical Application, Second Edition, Illustrated. Louis Wolff, M.D., Visiting Physician, Consultant in Cardiology and Chief of the Electrocardiographic Laboratory, Beth Israel Hospital; Assistant Clinical Professor of Medicine, Harvard Medical School. 1956. Pp. 342. W. B. Saunders Company, Philadelphia, \$7.00.

There are three parts in this excellent text and reference volume. Part I is concerned with the basic principles of electrocardiography; Part II covers clinical electrocardiography, and Part III the normal and abnormal cardiac mechanism.

The chapters on bundle branch block, left and right ventricular hypertrophy and coronary heart disease, myocardial infarction should be of especial interest to all physicians who practice cardiology whether as specialists or as general practitioners. The addition of the section on the arrhythmias is most helpful.

The context is lucid, the illustrations concise, and the format clear and pleasing throughout the entire text. It is to be recommended for inclusion in the library of all who are concerned with electrocardiography.

G. H. Butler



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OBJECTIVES OF MEDICAL EDUCATION*

F. DOUGLAS LAWRASON, M. D.†

It is indeed fortuitous and appropriate that the first nationwide "Medical Education Week" comes at the time of the annual meeting of the Arkansas Medical Society and at a time when the entire State looks to the opening of its new Medical Center. The Governor in his proclamation of Medical Education Week both recognized the progress made in the field of health by the State and looked to the future of the University Medical Center.

Patience has been at a premium in waiting for the opening of the Center—but now it is at hand and action and deeds must take the place of words. Promises have been made and now they must be fulfilled.

First, however, we must be clear as to the purpose, function and objectives of the University Medical Center. These objectives are threefold in number and have been before us since the concept of the original plans. They are education, research and patient care. Another way of identifying these three functions is the teaching of men to be physicians, the prevention of disease and the giving of aid and comfort to the sick.

These objectives and goals are not extraordinary to this Medical Center but each is a responsibility which must be met and cannot be compromised without detracting from the other two or from the total effort. It is most difficult to separate education, research and patient care but permit me to reflect briefly on various aspects of these responsibilities of the Medical Center, its School of Medicine and its University Hospital.

The primary function of the School of Medicine is education. It is a University School of Medicine because it is an institution of higher learning conducted in an atmosphere of academic values. It is staffed by scholars who through their unending search for truth and knowledge bring forth an inspiration and desire to learn on the part of stu-

dents and their fellowmen. These teachers are dedicated to teaching and research and bring dignity and substance to the medical sciences. If the medical sciences were purely applied sciences, there would be little need for this affiliation with a University. However, the Medical Sciences and this School of Medicine encompass many fundamental sciences such as Biochemistry, Microbiology, Physiology and others. Indeed, in medicine itself I fully anticipate as we begin to explore fundamental reactions in human behavior, coupling basic biological knowledge with an understanding of social reaction, bridges will be constructed between the organic and the social aspects of human behavior. Good medicine is not empirical, it embodies concept and theory, it demands consideration as a science and unless academic status is recognized and academic freedom in the pursuit of knowledge is allowed, progress in the medical sciences cannot be expected.

A recent publication, "Medical Research: A Midcentury Survey," points out as part of its conclusions that the only real health insurance of more than temporary benefit is that insurance which provided the community with the most modern, constantly improving health service staffed by thoroughly competent personnel. Money alone will not guarantee this and the real crux of the problem lies in the understanding and the wholehearted support of medical education and research by the people.

Educating medical students today is a complex and in many ways a controversial problem. It differs widely from the educational procedures of fifty and even ten years ago. The curriculum is constantly changing. The faculty must remain on the alert to sense the need for change. The teaching of medicine today calls for a flexibility of mind which is demanded of few other professions.

It is because of the rapidly changing profile of medicine as a science and as an art that the curriculum and methods of teaching seem to be in a constant state of flux. Medical Education since

* Presented at the Eightieth Annual Session of the Arkansas Medical Society, Little Rock, Arkansas, April 25, 1956.

† Provost, Medical Affairs. University of Arkansas.

the Flexner Report has built a fine tradition but times have changed and medicine has progressed far since 1910. Our primary objective is not necessarily to preserve the status quo. However, to change capriciously for the sake of change or to follow a fashion or fad for the sake of popularity is to strike at the very heart of this fine tradition. Our goal is to meet the changing needs of education in an effort to improve our health by improving the basic conditions of human life. Change is part of this splendid tradition and by doing a sound job in education, research and in service, the University Medical Center will reinforce this tradition.

The student is the vital core of education and he must live and work daily in a stimulating environment which nurtures intellectual growth. Alfred North Whitehead, the distinguished philosopher, has said that the proper function of a University is the imaginative acquisition of knowledge and a University without imagination is nothing. Likewise, a student must be motivated to learn, he must be curious and have the capacity to sift scientific fact from ungrounded authority. A medical student without these attributes and one who accepts data uncritically becomes nothing more than a technician. The physician-scientist is forever a student. The physician-technician is as dated as the Model T Ford—he still does a job but one of which we are not necessarily proud. The point that I wish to make here is that if the School of Medicine is to carry out its function properly, we must have good students.

Assuming the student body is receptive and strongly motivated, medical education must provide the opportunity for him not only to gain knowledge in the field of medicine but it must also provide for his development in the art and science of the free man and as a citizen. The science of medicine marches on but this cannot be at the expense of the art of medicine. In this day of complex science human frailties, insecurity and bewilderment easily reach the surface. It isn't that today the skin is thinner but only that science more easily penetrates and unmask the human revealing his chemical structures, his proteins and, indeed, his atoms. Is it no wonder that the patient's name is lost in the search for his atom? Is it no wonder that mental illness is so common? The art of medicine is more indispensable today than ever before. Medical Education must recognize this and assure its graduates of a capacity to understand and explore with sympathy and sincerity the problems of human behavior.

For these and many other reasons research is an integral part of any educational program. The teacher must be involved in investigation and experimentation if he is to be effective in stimulating and inspiring the student to seek knowledge. But to carry out research demands time—free time for the investigator to think, to contemplate and to explore. Ideas arise unpredictably and from unsuspected places. The faculty cannot be expected to fulfill its obligations in teaching and research if they are constantly harassed by extraneous and diverting demands. One such demand is that of the private practice of medicine. As all of us know, a practicing physician's first responsibility is to his patient. Under the plan for a full-time faculty the staff's first responsibility is to teaching and research. This is not to say that the patient is ignored to the slightest because at all times certain members of the staff on a rotational basis do carry the unending responsibility for patient care. Meanwhile, the staff can unhesitatingly carry out its full-time responsibilities for teaching. Under this system the faculty is not forced to choose between teaching and research on the one hand and making a living on the other.

The student is the direct beneficiary of such a program and he, too, is then in a position to express his own curiosity and his ideas. The scientific method cannot be forced. It must become a natural part of the student's learning if he is to develop sound habits expressing the critical mind which is to remain with him the rest of his professional life.

I have said little about patient care for it is my firm conviction that good medical care within a University Hospital arises naturally out of good education. How could we possibly expect our students to recognize the practice of good medicine if we at the Center do not carry forth top-notch medical care? It would be impossible to expect otherwise and we would fail before we began.

Therefore, in developing programs of education research and medical care we must be willing to turn to the mirror not with modesty but with searching eyes, a critical mind and a forthrightness to criticize ourselves. If we are not willing to examine our own profile honestly and without hesitation and be ready to take positive steps in its improvement we are not fit to carry the pledge of this fine State in building the kind of Medical Center this Center ought to be.

This is not a frivolous institution. It has been built with sweat, vision and imagination and its

charter cannot be toyed with by the whims or the pressure of a few. I, for one, will not sit quietly by if the principles and the future of the Medical Center are placed in jeopardy in the slightest.

I speak with confidence when I promise that the job that will be done at our new Medical Center will bring forth a feeling of pride to the people of Arkansas and especially to you, our professional associates, in every corner of this State.



THE SURGICAL TREATMENT OF OBSTRUCTIVE JAUNDICE*

GEORGE A. HALLENBECK, M. D.

Section of Surgery, Mayo Clinic and Mayo Foundation†
Rochester, Minnesota

Jaundice is a relatively common phenomenon that can result from a number of diseases having in common a disturbance in the formation or excretion of bile pigment. An understanding of the mechanism by which the body handles bile pigment is essential to proper interpretation of tests to determine the cause of jaundice in a particular patient.

Metabolism of Bile Pigment

Normally, hemoglobin is set free as erythrocytes are destroyed. Its iron component is separated from the remainder of the molecule, leaving a green pigment that is taken up by reticulo-endothelial cells throughout the body. These cells transform it into a type of bilirubin that does not give the color reaction to the van den Bergh reagent directly but only after alcoholic precipitation; therefore, this pigment is called "indirect-reacting bilirubin." When acted on by hepatic cells, indirect-reacting bilirubin is changed so that it reacts to the van den Bergh reagent without being treated by alcohol. In this form, the pigment is referred to as "direct-reacting bilirubin." A very small amount of direct-reacting bilirubin normally is present in serum, and none is detected by some of the methods used clinically. The indirect-reacting pigment is normally present in serum in concentrations of 0.5 to 1.0 mg. per 100 ml. Direct-reacting bilirubin passes into bile ducts in the liver and thence to the intestine, where it is changed by bacterial action into several compounds referred to as "urobilinogen." Some of the urobilinogen is reabsorbed and returned to the liver, where it is changed again to bilirubin. Thus, enterohepatic circulation of bile pigments

occurs. A small amount of urobilinogen normally appears in the urine.

Clinical Classification of Jaundice

Simple systems of classification are often helpful in organizing one's approach to clinical problems, and the following serves well when physicians are faced with the differential diagnosis of jaundice. Jaundice can be considered to be hemolytic, hepatocellular or obstructive in origin. The first type occurs with an increase in the rate of erythrocytic destruction, the second when certain diseases of the liver itself are present and the third when obstruction occurs in some part of the biliary tract. The clinical problem is one of determining which of these types of jaundice is present so that surgical treatment can be advised for patients who need it and avoided in those for whom it would be useless or even harmful.

Hemolytic Jaundice

As just indicated, hemolytic jaundice occurs when the rate of erythrocytic destruction is increased, with consequent overproduction of bile pigment. The liver and biliary tract are typically normal, although gallstones made of bile pigment may form when the condition is chronic. The bilirubin present in increased concentration in the serum is of the indirect-reacting type. The rate of excretion of bilirubin by the liver is increased and, as a result, the quantity of urobilinogen appearing in feces is greater than the normal daily total output of 40 to 280 mg. Anemia is commonly present and becomes severe during exacerbations of the disease; the spleen is usually enlarged. Hemolytic jaundice may be congenital or acquired. A history of the disease in other members of the family is common in the congenital familial variety, which is manifested by in-

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† The Mayo Foundation, Rochester, Minnesota, is a part of the Graduate School of the University of Minnesota.

creased fragility of the erythrocytes and the presence of abnormally shaped erythrocytes (spherocytes) in smears of the blood.

One occasionally sees a patient who has chronic mild jaundice and an increase of indirect-reacting bilirubin in the blood but in whom the quantity of urobilinogen excreted in the feces in 24 hours is normal. Results of all other tests of hepatic function are normal and anemia is absent. This disorder, which is termed "constitutional hepatic dysfunction" and which could be confused with hemolytic jaundice because of the increase of indirect-reacting bilirubin, pursues a benign chronic course and requires no treatment. It is important that the process be recognized so that patients will not be confined to bed with a mistaken diagnosis of hepatitis or subjected to needless operations.

Hepatocellular Jaundice Versus Obstructive Jaundice

Differentiation between hemolytic and obstructive jaundice is usually easy. However, differentiation between obstructive and hepatocellular jaundice can be difficult and is of great importance. Obstructive jaundice usually can be benefited by operation and is followed by increasing damage to the liver if surgical intervention is delayed, whereas hepatocellular jaundice cannot be relieved surgically and operations performed in its presence are attended by great risk to the patient.

Hepatocellular jaundice results from diffuse disease of the hepatic cells. Infectious hepatitis, homologous serum hepatitis and portal cirrhosis account for most of the cases seen in this country, although hepatocellular jaundice may occur in such specific diseases as yellow fever, dengue, infectious mononucleosis, Weil's disease, brucellosis, typhoid fever and septicemia, and as a result of several exogenous toxic chemicals.

The commonest benign causes of obstructive jaundice are stone in the common bile duct, benign stricture of the common bile duct and, occasionally, pancreatitis. Obstruction of the extrahepatic biliary tract can be caused by malignant disease of the head of the pancreas, ampulla of Vater or bile ducts and occasionally by metastatic lesions from carcinoma of other organs.

As is usual, the proper diagnosis awaits interpretation of the history, physical examination and results of laboratory tests.

History.—When taking the history of a jaundiced patient, one pays particular attention to the symptoms and circumstances that preceded the onset of jaundice, to possible exposure to viral

hepatitis or exogenous toxins and to a complete description of any abdominal pain that may have occurred. Infectious hepatitis is a viral disease, usually transmitted via the gastrointestinal tract, with an incubation period of 3 to 6 weeks. Its onset is usually abrupt, with nausea, anorexia, fever, malaise and sometimes signs of infection of the respiratory tract. A history of exposure to other patients with the disease occasionally can be obtained. Homologous serum hepatitis is transmitted by parenteral administration of human blood or its products, such as plasma; its incubation period is 2 to 6 months. As little as 0.01 ml. of contaminated plasma may be enough to transmit the virus. The need of a careful history regarding previous parenteral injections is evident. Likewise, inquiry should be made regarding the patient's use of alcohol and of possible exposure to drugs such as chlorpromazine (thorazine), cinchophen, chloroform and sulfonamides or to chemicals such as carbon tetrachloride.

A long history of indigestion, perhaps accentuated by ingestion of fatty foods, may suggest gallstones. Episodes of biliary colic with associated jaundice, chills and fever suggest the likelihood of stone in the common bile duct. Although benign strictures of the bile ducts occasionally may result from cholangitis, they usually follow inadvertent trauma to the duct during cholecystectomy. Trouble usually appears in the immediate postoperative period and consists of rapid development of jaundice that may become deep and persistent if the common duct is completely interrupted or that may recede if an external biliary fistula develops. Such biliary fistulas tend to close spontaneously, only to be followed by recurrence of jaundice and the development of pain, chills and fever. Sometimes when a narrow passage for bile is present, symptoms of stricture are chronic and intermittent. Thus, in the study of a patient who previously has undergone cholecystectomy and who has what may be obstructive jaundice as the result of stone or stricture, it is important to learn whether stones were present in the gallbladder at the time of cholecystectomy or whether the common bile duct was explored and, if so, what was found and to obtain detailed information about the postoperative course.

Patients who have carcinoma of the head of the pancreas often experience progressive anorexia, loss of weight and decline in vigor during the 4 to 6 months before jaundice appears. Jaundice can be the first indication of illness in patients who have carcinoma of the ampulla of Vater.

The presence or absence, as well as the quality, of pain associated with jaundice deserves careful consideration in taking the history. Hepatitis is usually painless, although some patients complain of tenderness in the region of the liver and a few have enough pain to confuse the picture. Most patients who have stones in the common bile duct will have had severe episodic colicky abdominal pain at some time, although it need not be related chronologically to the onset of jaundice. Patients' attitudes toward pain vary; one may emphasize and another may minimize it. Careful questioning usually will disclose its presence in the latter patients, although a few patients, often elderly, with obstruction of the common bile duct caused by stones apparently have no pain at any time. Somewhat similar pain can occur in association with stricture of the common bile duct. The pain of pancreatitis is less well localized and tends to last for several days instead of a few hours. Jaundice caused by ampullary carcinoma is usually painless, although episodic colicky pain occasionally may occur. Jaundice caused by carcinoma of the head of the pancreas is often thought of as painless and sometimes is so, but many patients have somewhat vague but constant upper-abdominal discomfort often referred to the back by the time jaundice is manifest. The pain of pancreatic carcinoma is less severe than biliary colic but is constant, boring and often worse at night; it is likely to cause the patient to assume unusual postures, such as sitting bent over in a chair to obtain relief.

Physical Examination.—The liver may be palpable in obstructive or hepatocellular jaundice. An extremely large liver usually means a primary or metastatic malignant process. Coarse nodularity of the liver favors the diagnosis of a malignant lesion. A palpable spleen is rarely present in patients who have malignant involvement; in the patients under discussion, a palpable spleen usually indicates primary and chronic hepatic disease. A careful attempt should be made to identify a distended gallbladder. In the presence of neoplastic obstruction of the bile ducts, the gallbladder is usually normal and can dilate hugely to become palpable. When obstructive jaundice is caused by stone, associated cholecystitis usually has caused the wall of the gallbladder to become thickened so that it does not dilate enough to become palpable. The gallbladder is not dilated in jaundice caused by hepatocellular disease. The generalization that a palpable gallbladder in the presence of jaundice indicates obstruction of the bile ducts as the result of a malig-

nant lesion is well known as Courvoisier's law. Although not infallible, it is a useful rule. The mass in carcinoma of the pancreas sometimes can be felt in patients who are not too obese.

A search should be made for such peripheral evidence of intrahepatic disease as cutaneous spider nevi, palmar erythema, fetor hepaticus and, in men, gynecomastia and diminished amount of hair on the abdomen and thorax. Severe factitial dermatitis resulting from scratching stimulated by intense pruritus is common in both obstructive and hepatocellular jaundice.

Edema and ascites are uncommon in obstructive jaundice unless the obstruction has been present long enough to cause considerable hepatic damage or unless ascites is a manifestation of abdominal carcinomatosis.

Hard lymph nodes in the supraclavicular region or in the pouch of Douglas are evidence for a malignant lesion. Biopsy of the former may settle the question.

Laboratory Diagnosis.—Direct-reacting bilirubin predominates in obstructive jaundice, but the amount of such bilirubin exceeds that of the indirect-reacting type in both obstructive and hepatocellular jaundice. Thus, this test does not differentiate between the two types of jaundice. The total serum bilirubin gives a reliable index of the severity of jaundice and repeated determinations indicate whether it fluctuates. Concentrations of 15 mg. or more per 100 ml. mean either complete obstruction or severe parenchymatous hepatic damage. Concentrations of less than 12 mg. suggest either that the jaundice is not obstructive in origin or that obstruction is not complete. The serum bilirubin in jaundice caused by neoplastic obstruction typically increases rapidly, reaches a plateau and remains there. Jaundice produced by stricture or stone typically fluctuates and is less intense, although exceptions occur. Extremely great concentrations of serum bilirubin (25 to 50 mg. per 100 ml.) usually mean neoplastic obstruction of the bile ducts or severe hepatitis but occasionally are seen in complete obstruction resulting from stones.

The patency of the bile ducts may be tested in two ways, namely duodenal drainage performed with the position of the tube checked by roentgenologic examination and determination of fecal urobilinogen. Recovery of bile from the duodenum means that the liver is forming bile and that the extrahepatic bile ducts are not completely obstructed. Failure to recover bile may occur for a brief period in severe hepatitis due to suppres-

sion of formation of the substance but usually it indicates complete obstruction of the biliary tract. Values of 0 to 10 mg. for the 24-hour fecal excretion of urobilinogen have the same significance. Thus, although permanent absence of bile or urobilinogen from the intestinal tract usually means neoplastic obstruction, repeated tests may be necessary to be certain the findings do not reflect temporary suppression of formation of bile in severe hepatitis.

Certain tests have been devised that are dependent on changes in plasma proteins and lipides; results of these tests are positive when hepatocellular disease is present. The three most commonly used at present by my colleagues are the cephalin-cholesterol flocculation test, the thymol turbidity test and the zinc sulfate turbidity test. The reactions tend to be positive early in the course of hepatitis but can become positive later in the course of obstructive jaundice when the process has resulted in hepatic damage.

Certain other tests are often useful. The concentration of cholesterol and cholesterol esters in the blood is usually increased in obstructive jaundice and normal or decreased in hepatocellular jaundice. Serum alkaline phosphatase, although increased in both obstructive and hepatocellular jaundice, is commonly increased to a greater extent in obstructive jaundice. A lowered concentration of serum albumin and a reversal of the albumin-globulin ratio is commoner in hepatocellular than in obstructive jaundice. The prothrombin time may be prolonged in either type of jaundice but usually returns to normal more quickly after administration of vitamin K in the absence of hepatocellular disease.

No single test of hepatic function differentiates obstructive from hepatocellular jaundice. Results of several tests must be weighed and interpreted in relation to the history and physical examination.

Surgical Treatment of Obstructive Jaundice

If one concludes that obstructive jaundice is present after working through the differential diagnosis between hepatocellular and obstructive jaundice, he advises surgical treatment. The differentiation among obstructive jaundice caused by stone, stricture or neoplasm is sometimes almost certain but often is in considerable doubt and cannot be settled until operation is performed. Adequate preoperative preparation is most important and may require from a few days to a week or more. Anemia should be corrected by blood transfusions. A diet containing large amounts of carbohydrates and protein and a min-

imum of fat is given and may be supplemented by intravenous administration of solutions of dextrose. It is especially important to detect increases in the prothrombin time, which indicate depletion of prothrombin, and to restore it to levels as nearly normal as possible by administration of vitamin K. This prevents a bleeding tendency that formerly contributed so much to the increased risk of operation on jaundiced patients. If an increased prothrombin time does not return to normal after administration of vitamin K, considerable hepatic damage is present and the risk of operation is increased.

Once the abdomen has been opened, the surgeon's first task is to determine the nature of the lesion and, if it is malignant, whether it can or should be resected.

When biliary obstruction is caused by a stone or stones in the common bile duct, cholecystitis and cholelithiasis are usually present if the gallbladder has not been removed previously. Additional findings are as follows: the gallbladder is not greatly dilated, the common bile duct is enlarged and may or may not contain palpable stones, a malignant tumor is not palpable in the region of the head of the pancreas, although some thickening may be noted around the ampulla, and metastatic lesions of the liver or elsewhere are absent. This situation calls for exploration of the common bile duct, removal of the stone or stones, ascertainment by use of scoops and probes that a free passageway is present from the common bile duct into the duodenum, drainage of the common bile duct with a T-tube and cholecystectomy.

When benign stricture of the common bile duct is present, the gallbladder almost always has been removed previously. No obvious signs of a malignant tumor are present, of course. The hepatic flexure of the colon and the omentum, duodenum and gastric antrum are likely to be adherent to the lower surface of the right lobe of the liver and can be separated from the liver by sharp dissection. As the hilus of the liver is approached, dense fibrosis is encountered typically in the region of the common bile duct. When the lateral aspect of the hepatoduodenal ligament has been exposed and the hepatic artery has been located, the region in which the common bile duct should lie can be ascertained by reference to these landmarks. Although the duct above and below the strictured zone can be located fairly readily in a few cases, the dissection is usually tedious and difficult. Sometimes a long segment of duct is missing, even including the common hepatic duct.

The type of operative repair to be carried out for benign stricture depends on the findings at operation. The possibilities include excision of the stricture and reunion of duct to duct or anastomosis of the hepatic ducts, the common hepatic duct or the common bile duct to the duodenum or to a Roux en Y loop of jejunum. Occasionally, a suitable bile duct cannot be found and all that can be done is so-called hepaticostomy, accomplished by placement of a catheter and drains into the region of the hilus of the liver to establish an external biliary fistula. In one series of 113 such operations reported by Walters and Kelly,¹ ducts were anastomosed to the duodenum in 66 instances (58.4 per cent), ductal continuity was re-established in 30 (26.6 per cent), ducts were anastomosed to the jejunum in six (5.3 per cent) and hepaticostomy was done in 11 (9.7 per cent). When the common bile duct was anastomosed to the duodenum or when ductal continuity was re-established, 71 per cent of patients remained well at least 1 year; when it was necessary to use hepatic ducts, only 53 per cent remained well for a year or more. Late recurrence also can take place. Recurrence is not a contraindication to reoperation provided hepatic function is adequate. Successful anastomoses have been performed even after repeated failures. For patients in whom extrahepatic bile ducts satisfactory for anastomosis to the intestine could not be found, Longmire and Sanford² used an operation whereby part of the left lobe of the liver is resected to allow identification and isolation of a large intrahepatic bile duct. They performed end-to-side anastomosis between this duct and the jejunum and completed the procedure by side-to-side jejunojejunostomy between the loops of intestine leading to and from the liver. Too few of these operations have been reported to permit evaluation of the procedure, but some success has been obtained. At present, the operation is done only when extrahepatic ducts are not available.

Great impairment of hepatic function with long-standing jaundice, greatly abnormal values for hepatic function tests and ascites causes the operative risk to be extremely high and, if the patient survives, relief of biliary obstruction may not produce significant benefit. This emphasizes the seriousness of benign stricture of the bile duct. While continual improvement must be made in the surgical treatment of this disorder, it is even more important that physicians do everything possible to prevent its occurrence. There is no substitute for adequate anesthesia, good exposure, discipline in hemostasis when bleeding occurs, and training and experience in accurate dis-

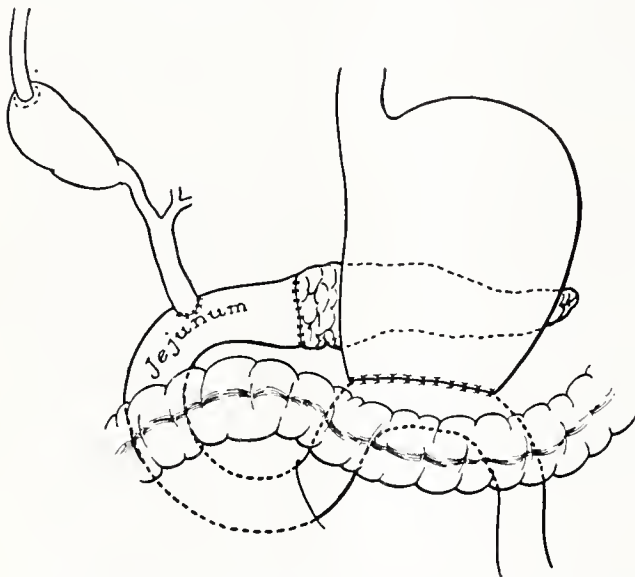
section of the common bile duct, cystic duct and cystic artery during cholecystectomy.

When obstructive jaundice is caused by neoplasm, the gallbladder is typically thin-walled and distended except for unusual instances in which previous disease has rendered it inelastic or in which tumor blocking the hepatic or cystic ducts prevents bile from reaching it. Although a strategically placed carcinoma of the head of the pancreas may cause obstructive jaundice while the tumor is still extremely small, the presence of large nodular hard tumors is the rule. Biopsy of the pancreas sometimes makes the diagnosis but the results are often falsely negative. If obvious metastasis is absent, the surgeon may have to rely on appraisal of the lesion based on gross inspection and palpation. Carcinomas of the ampulla may be soft and difficult to palpate. Direct inspection of the papilla of Vater after duodenotomy may be necessary for unquestionable diagnosis.

When the surgeon is satisfied that a carcinoma is producing obstructive jaundice, he must decide whether the lesion is sufficiently localized to permit and warrant resection or whether a palliative procedure to relieve jaundice and sometimes to forestall or correct obstruction of the duodenum is preferable. Since palliative procedures offer no hope of cure, resection is preferable. Resection means performance of the so-called Whipple operation, in which the duodenum, head of the pancreas and the distal portions of the common bile duct and stomach are removed and the biliary tract, stomach and sometimes the tail of the pancreas are anastomosed to the intestine. Because resection in the presence of metastatic lesions that cannot be removed in entirety is followed by no greater comfort and no longer survival than are palliative procedures, and because the operative mortality and morbidity rates in such patients are excessive, resection is to be avoided in these circumstances. Thus, the presence of metastatic tumors in the liver, omentum, root of the mesentery and the lymph nodes around the aorta and celiac axis, as well as more distant metastasis, is a contraindication to the Whipple operation. In the absence of these findings, the surgeon must decide whether fixation of the lesion itself by local extension precludes its removal. Firm fixation posteriorly or malignant attachment to the superior mesenteric vessels sometimes makes it apparent that resection is impossible. On other occasions, operability cannot be determined until an attempt at resection has been begun; in those instances, malignant involvement of the portal or

superior mesenteric veins is the commonest cause of failure.

Approximately 30 per cent of malignant lesions causing jaundice are suitable for resection. In a few instances, resection in two stages can be done, jaundice being relieved by the first operation and resection being performed after the patient's condition has improved. Many different anatomic arrangements have been used to re-establish gastrointestinal continuity, to join the biliary tract to the intestine and to dispose of the remainder of the pancreas. The most satisfactory procedure in the experience of my colleagues and me has been end-to-end pancreatojejunostomy with end-to-side choledochojejunostomy and end-to-side postcolic gastrojejunostomy (see figure). Bile and pancreatic juice enter the



A satisfactory method of reconstruction after resection of the duodenum and the head of the pancreas. End-to-end pancreatojejunostomy, end-to-side choledochojejunostomy and end-to-side gastrojejunostomy are done. Cholecystostomy is done in some instances but not routinely. (Reprinted with permission from Waugh, J. M.: *Surgical Diseases of the Pancreas*. In Walters, Waltman: *Lewis' Practice of Surgery*. Hagerstown, Maryland, W. F. Prior Company, Inc., 1952, vol. 7, p. 45.)

jejunum before the acid gastric juice does and are available to neutralize acid and minimize the chance of formation of gastrojejunal ulcer. The operative mortality rate for the Whipple operation, formerly 30 to 40 per cent, is now about 20 per cent when all cases are considered. Both operative mortality and survival rates are better when the operation is performed for ampullary carcinoma than they are when carcinoma of the head of the pancreas provides the indication for surgical intervention. In a series of 85 cases from the Mayo Clinic,³ the operative mortality rate when the operation was done for ampullary car-

cinoma was 4.2 per cent; for carcinoma of the head of the pancreas, the rate was 28 per cent. In carcinoma of the pancreatic head, three (12.5 per cent) of 24 potential survivors lived 3 years or more and three (16 per cent) of 19 possible survivors lived 5 years or more. Comparable 3-year and 5-year survival rates for patients who had carcinomas of the ampullary region after the Whipple operation were 47 and 38 per cent, respectively. Patients who survive this operation but die later of recurrent carcinoma live no longer than do others who have only palliative procedures. Patients who survive 3 years have an excellent chance of living 5 years or more. Results of radical extirpation of carcinoma of the ampullary region are such that no one doubts the value of the procedure when it can be performed. Results of this treatment for carcinoma of the head of the pancreas are discouraging, but since no other procedure at present offers any hope of cure, radical resection is justifiable in properly selected cases.

If the lesion is inoperable, the surgeon should relieve the jaundice whenever possible by making some type of anastomosis between the biliary and intestinal tracts. Gastroenterostomy should be performed as well when actual or impending obstruction of the duodenum is present. Anastomoses between the gallbladder and the stomach, duodenum or jejunum, and anastomosis between the common bile duct and the duodenum have been used successfully and I do not know of any data to establish one as unequivocally superior to the others. Cholecystojejunostomy and choledochoduodenostomy have worked well for me. The operative mortality rate for these palliative procedures was extremely great in the past, rates as much as 50 per cent being reported in earlier literature. This situation has improved greatly with the advent of vitamin K to correct deficiency in prothrombin preoperatively and with improvement in general supportive care. During the 5-year period from 1949 to 1953, inclusive, the operative mortality rate for 212 operations at the Mayo Clinic to relieve jaundice caused by obstruction of the bile ducts by malignant lesions was 7.5 per cent. Survivors almost always are relieved of jaundice, but the survival period is usually short, averaging about 6 months in carcinoma of the pancreas and approximately a year in ampullary carcinoma.

Summary

The treatment of obstructive jaundice is basically surgical. Whether surgical treatment is curative, palliative or to no avail depends on the

nature of the obstructing lesion. To achieve the greatest possible success and to avoid doing harm by operating when nothing could be expected of surgical treatment, the surgeon and his medical colleagues must have a thorough knowledge of the differential diagnosis of various types of jaundice, of preparation of the jaundiced patient for operation and of operative procedures applicable to the different varieties of obstructive jaundice. Working together, they have much to offer many patients suffering from this group of disorders.

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SURGICAL TREATMENT OF GLOMUS JUGULARE TUMORS OF THE EAR

CHARLES S. LANE, JR., M. D.*

Fort Smith

In 1941, Guild (1) described the glomus jugularis. He compared it to the histological structure of the carotid body, being composed essentially of blood vessels of capillary or precapillary caliber with ribbons or nests of tumor (epithelioid like) cells between the vessels.

In 1953 (2), he described the structure more fully. He found that jugular bodies occur with almost equal frequency along the courses of the nerve of Jacobson (tympanic branch of the glossopharyngeal nerve) and nerve of Arnold (auricular branch of the Vagus nerve). He stated that somewhat more than one-half of the glomus formations were found in the adventia of the dome of the jugular bulb, and about one-fourth in the mucosa on the promontory of the cochlea.

In 1945, Rossenwasser (3) reported the first case of a vascular tumor which was felt to have originated from a glomus body in the hypotympanum of the middle ear. He proposed the name glomus jugulare tumor.

Rossenwasser's report set the stage for a series of excellent articles that have appeared in the literature concerning this tumor since that time. These articles have been concerned with various aspects of the tumor. A number have dealt in part with suggested nomenclature. Some have discussed early signs and symptoms, as well as more advanced signs and symptoms. Diagnostic techniques have been emphasized, especially the

establishment of a diagnosis at a stage of the disease while the tympanic membrane is still intact. The X-ray findings at various stages of the disease have received discourse. Finally, a goodly number of the articles have concerned themselves largely with the problem of therapy, and here again the opinion as to what concerns the best means of therapy has varied. The recommended forms of treatment have been threefold: surgery; surgery and irradiation combined; and irradiation alone.

It will be the purpose of this paper to mention some of the above points stressed in certain of the articles that were reviewed, with special emphasis being given to the surgical aspects of the problem. Also, three cases observed at the Massachusetts Eye and Ear Infirmary and one observed in Fort Smith, Arkansas, will be reported.

Considerable controversy has arisen as to the appropriate nomenclature for the tumors. Rossenwasser (3) proposed the term "glomus jugularis tumor"; Lundgren (4) prefers "tympanic body tumor"; Lattes and Waltner (5) called them "non-chromaffin paraganglioma of the middle ear." Mulligan (6) proposed the term "chemodectoma" as a more descriptive term of tumors arising from paraganglionic tissue. He defined chemodectoma as a neoplasm consisting of chemoreceptor cells which are associated with the distribution of parasympathetic nerves and which originate in the adventia of blood vessels in structures inti-

* Read at the meeting of the Arkansas Medical Society, Little Rock, Arkansas, April 24, 1956.

mately connected with afferent nerve fibers or along the branches or in ganglia of the glossopharyngeal nerve.

At various stages of the disease a number of symptoms may occur. The two most common ones reported usually occur early. These consist of tinnitus, usually described as a swishing noise synchronous with the heart beat, and hearing loss usually initially of a conductive type, but often becoming a mixed type as the disease progresses.

Other symptoms that may occur are headache, vertigo, otalgia, nausea and vomiting.

The signs that present likewise vary with the stage of the disease. Early there has been described by a number of writers the appearance of the intact tympanic membrane with a glomus jugulare tumor present in the middle ear. The tumor may lend a bluish-pink discoloration to that portion of the drum beyond which it lies, usually the lower portion, the rest of the drum having a normal gray color. Two authors, Strong, M. S. (7) and Brown, K. A. (8) reported cases where myringotomies were performed through such drums with subsequent severe hemorrhage through the wound which was controlled by packing.

Capps, F. C. W. (9), in his article, presents several excellent colored plates which depict the appearance of an intact ear drum with a glomus tumor presenting beyond it in the middle ear.

Brown, L. A. (10) suggests a new sign which he feels may be important. He feels it occurs only in glomus jugulare tumors, not in cases of other middle ear tumors or aural polyps. He refers to it as the "pulsation sign." The test is performed by using a Bruening-Siegel otoscope speculum that fits tightly into the ear canal. By slowly increasing the pressure on the bulb, the tumor is seen to pulsate, sometimes almost violently, or if already pulsating, the pulsations are seen to increase. Then as the air pressure is further increased the tumor will blanch and the pulsations cease, only to recur as the pressure is slowly released, reaching a maximum and then diminishing again as the intrameatal pressure returns to normal.

Rosen, S. (11) describes a technique for biopsying glomus jugulare tumors when the tympanic membrane is intact. The technique exposes the tympanum for inspection of the extent of the tumor mass and avoids the severe hemorrhage occasioned by incision of the drum for biopsy. In performing it, an incision is made through the skin of the bony canal wall from "three to nine

o'clock" about 5 to 7 mm. external to the drum. The incised skin is separated from the bone as far as the drum. The drum is then lifted out of its sulcus and reflected upward upon itself, thus exposing the lower one-half of the tympanic cavity. The flap is turned back after the biopsy is taken.

In instances where the tumor has perforated the tympanic membrane the patient will appear to have an aural polyp, often with otorrhea and itching in the ear canal. Spontaneous hemorrhage may occur or profuse bleeding may be occasioned by the physician's attempt to remove the "polyp."

Black, J. I. M. (12), in a general article on the subject, offers a good description of the mode of extension of the tumor. Most commonly the tumor will fill the tympanum, penetrate the tympanic membrane and present in the external auditory canal as a polypus. If not treated, expansion of the bone will occur, but growth will be extremely slow. Extension beyond these limits will be along lines of least resistance. Thus, it may spread to the jugular foramen, causing possibly a series of nerve palsies, thence along the base of the skull or down into the neck. Also, it may find a path along the eustachian tube toward the nasopharynx. Destruction of the local bone may, of course, expose and paralyze the facial nerve, which has been noted especially in long-standing and nonsurgically treated cases. Apart from those arising in the tympanum, others are noted which have an intracranial spread, either early or as a late stage of the advanced case.

Brown, L. A. (10) points out that if there is any characteristic X-ray evidence of glomus jugularis tumor, it is a picture of the mastoid and petrous cells being "rubbed into coalescence." There is not so much demineralization as is seen in localized areas in acute surgical mastoiditis; there is not the sclerosis that appears in long standing chronic infection of the mastoid bone; there is not the obliteration of bone as is seen in cancer of the temporal bone.

As has been aforementioned, there is no universal agreement as to the proper method of treating a patient with a glomus jugularis tumor. The chief emphasis has been placed on surgical therapy. Winship, T., and Louzan, J. (13); Brown, K. A. (8); Strong, M. S. (7); Rosenwasser, H. (3). A combination of surgery and irradiation has been employed by some. Brown, L. A. (10) recommended this. He proposed using 2,500 r. to 4,800 r. starting seven to ten days following the surgery.

Williams, H. L., et al. (14) contend that irradiation

tion may offer better results than surgery. His opinion is based on thirteen cases observed and treated at the Mayo Clinic.

Shambaugh (15) strongly advocates the need for surgery. He describes a hypotympanotomy approach to these tumors in cases where the ear drum is still intact. The procedure is done in an effort to preserve the normal sound conducting apparatus and good hearing while still widely exposing the tympanic cavity via the hypotympanum. Quoting from Dr. Shambaugh's paper, the technique is as follows:

"1. The Shambaugh modification of the usual Lempert endaural incision is made, so as to preserve the skin that forms the curve of the posterior meatal wall.

"2. A supplementary incision through the skin of the inferior and anterior meatal wall along the outer edge of the osseous meatus is made.

"3. Elevation of the skin of the anterior, inferior and posterior osseous meatal wall as a tube to the sulcus tympanicus, thus exposing almost the entire extent of the tympanic bone.

"4. With a dental driven burr the anterior and inferior osseous meatal wall is thinned down so as to widen and enlarge downward and anteriorly the osseous meatus. The position of the facial nerve in the posterior meatal wall where it emerges from the stylomastoid foramen must be kept in mind. By removing the floor of the meatus anterior to, but not beyond, a vertical line through the posterior edge of the sulcus tympanicus, the facial nerve is safely avoided.

"5. Elevation of the annulus tympanicus from its sulcus anteriorly, inferiorly and posteriorly, is then done. This permits the pars tensa to be folded upwards on itself, exposing all but the upper anterior portion of the tympanic cavity.

"6. Resection of the bony sulcus tympanicus inferiorly so as to expose fully the hypotympanum and tumor within it.

"7. The tumor mass is then carefully teased away from the contents of the middle ear with preservation of the normal middle ear structures.

"8. The tympanic membrane and meatal skin are then folded back into position with split thickness skin grafts to line the enlarged meatus where it is not covered by its own skin."

In instances in which the tumor is more extensive and has filled the middle ear and antrum and has extended into the external auditory meatus through the tympanic membrane, a radical mas-

toidectomy appears to be the only feasible method of removing the tumor. The technique that will be described is the one previously described by Dr. Francis L. Weille and the author (16).

The classical Lempert endaural incisions were used and adequate exposure of the mastoid cortex was obtained. A perforating electrically driven burr was used to create a triangular-shaped opening in the mastoid bone in McEwen's triangle, the apex of the opening being directed toward the mastoid antrum. An oval cutting burr or a round semipolishing burr was then used to deepen this defect until the antrum was found.

The antrum was filled with very vascular tumor tissue from which free bleeding issued. This was controlled by exerting pressure with gauze strips. The location of the horizontal semicircular canal, which would have followed as the next step in a conventional radical mastoidectomy, was deferred. The reason for this was that any manipulation of the tumor tissue increased the bleeding. A search for conventional landmarks by removing this vascular tissue was not feasible.

The principle then used was removal of bone with an electrically driven burr from around the tumor tissue without touching the neoplasm itself. In other words, the patient was removed from the tumor. In order to accomplish this, the posterior superior canal wall was thinned down and lowered, and the bridge was removed. The anterior and posterior tympanic spines were then visible. Using these structures as landmarks, the removal of the posterior-superior canal wall was continued and the epitympanum was widened.

Removal of this bone did not entail traumatizing any of the tumor. The neoplasm was kept free of the burr by gentle pressure with a small elevator. Bleeding was thus kept at a minimum.

Though the horizontal semicircular canal had not been seen, the approximate course of the horizontal portion as well as the beginning of the descending portion of the facial nerve could be determined. With the position of the nerve in mind, removal of bone necessary to open the middle ear widely was continued.

Because the inner portion of the canal wall epithelium appeared to be involved with tumor, this portion of the skin was sacrificed. This was accomplished by cutting in circular fashion across the skin of the canal outside the limit of extent of tumor tissue and then separating the skin from the bony canal wall from without inward to the tympanic sulcus. Then the remainder of the bone

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¹Albertson, H.A. and Trout, H. H., Jr.: *Antibiotics Annual* 1954-55, Medical Encyclopedia, Inc., New York, N.Y., 1955, pp. 599-602.

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work at the margin of the middle ear space and external auditory meatus was completed with the electric burr.

There now presented a sizable block of neoplasm from the outer margins of which bone had been removed. Very gentle separation of this tumor tissue from the bone that lay deep to it was accomplished with a small Lempert periosteal elevator. When sufficiently freed, it was possible by rapid dissection to remove en bloc the mass which had filled the mastoid antrum, middle ear, and inner portion of the external auditory meatus. Free bleeding was encountered as the bloc was removed, but this was controlled by firm pressure with gauze packing. A small amount of neoplastic tissue was left in the floor of the middle ear cavity where the tumor appeared to arise from the jugular bulb. As much residual neoplasm as possible was teased away until violent easily controlled hemorrhage, apparently from the jugular bulb, was encountered. It was not of practical value to remove more tissue in this region. Other than for this, it was felt that complete excision of the tumor was accomplished. A complete radical mastoid cavity had been created; it was then finished completely.

Case Reports

Case I: L. C., a 41-year-old white female, was referred to the Massachusetts Eye and Ear Infirmary on July 5, 1949, by a private physician, with a diagnosis of polyp of the left middle ear.

The history was as follows: Eighteen years previously she had developed a slight hearing loss in her left ear which had not noticeably increased until the months following the birth of her fourth child on December 11, 1945. At this time, she also noticed an increase in the quantity and frequency of a "buzzing" tinnitus which had occurred intermittently for several years.

In May, 1946, while she was removing cerumen from her left ear with a hairpin, the hairpin "appeared to get caught" in the ear canal, and when she removed it there was slight bleeding from the canal for a few minutes. During the following week she developed a purulent, foul-smelling otorrhea with a definite increase in the hearing loss in this ear.

In July, 1946, with the painless otorrhea still present, she first consulted a physician about the ear. Following his initial examination, the otologist informed her that she had a polyp in her ear, and subsequently she was admitted to a hospital, where the polyp was removed.

From that time until December, 1948, she had no further otorrhea, but the hearing loss in the ear slowly progressed. At no time was there any pain, nausea, vomiting, vertigo or headache. Occasionally she noticed a slight buzzing tinnitus localized in the left ear.

In December, 1948, while she was scratching the external auditory canal of her left ear with her fingertip, she felt a soft mass. This caused her to consult her physician, who discovered another polyp in the canal, and she was once more admitted to a hospital where the polyp was removed.

There was no aural discharge from that time until March, 1949. At this time, however, a slight otorrhea developed, which progressively increased in quantity and became foul; also, she began to experience otalgia which was stabbing and fleeting in nature. At no time did she have headache, vertigo, nausea or vomiting. Around the last of June, 1949, she again saw her physician, who told her that the polyp in her left ear had recurred. He then sent her to the Massachusetts Eye and Ear Infirmary.

The general physical examination was normal except for bilateral varicose veins of the legs.

Important local findings were limited to the left ear. Immediately inside the external auditory canal there presented the outer margin of a firm, grayish-white mass which completely occluded the canal. The canal was bathed with pus. The mass was slightly movable, and it appeared to be attached deep in the canal or in the middle ear. The auricle and mastoid were normal to inspection and palpation.

An air-conduction audiogram demonstrated normal hearing in the right ear and a 40 to 65 db loss in the left ear. The Weber test was lateralized to the left, and the Rinne test of the left ear was negative. Mastoid X-rays were reported: "Both mastoids are small. The left mastoid is increased in density."

Thirty cc. of iced alcohol syringed into the left external auditory meatus produced no nystagmus or vertigo. The fundi were normal; the neurological examination was not remarkable. X-rays of the base of the skull failed to demonstrate any bony erosion. X-rays of the hands, feet, pelvis and hips were negative for possible metastasis.

On July 12, 1949, a large portion of the mass presenting in the left external auditory meatus was removed with an aural snare. Profuse bleeding from the canal followed removal of this tissue, and required firm packing with gauze strips for

adequate control. There was no bleeding when the packs were removed the following day. The pathological report of the biopsy was "glomus-jugulare tumor."

A left endaural radical mastoidectomy with removal of the tumor was then performed as previously described.

The patient's postoperative course was entirely uneventful. At the end of a month, she was ready for discharge. The cavity at this time had a very satisfactory configuration; the graft had taken well; the ear was dry.

The patient subsequently moved to Providence, Rhode Island, where she was followed by the Tumor Clinic of the Rhode Island Hospital. The most recent available information regarding the patient was dated February 23, 1955, at which time there was no evidence of recurrence.

Case 2: L. M., a 57-year-old white female, was first seen at the Massachusetts Eye and Ear Infirmary in September, 1944, complaining of discharge from the right ear for nine years. There had been an occasional attack of dizziness, but no true rotary vertigo, and there had been no headache, nausea or vomiting. She had noticed gradual progressive hearing loss in her right ear. She had also experienced several bouts of hemorrhage from the right ear which she had been able to control at home with cotton packs.

The general physical and neurological examinations were normal.

The local examination revealed the external auditory meatus of the right ear to be filled with a granular mass which bled when manipulated. Otherwise the local findings were not remarkable.

X-rays of the mastoids were reported as follows: "Both mastoids are small. The right mastoid is sclerosed; the left mastoid is pneumatized and clear."

On September 19, 1944, the mass in the right external auditory meatus was partially removed by means of an aural snare. This procedure was accompanied by rather profuse hemorrhage from the canal, which was controlled by adrenalin packs. The hemorrhage recurred the following day, but the packing was removed the second postoperative day, without further bleeding. Biopsy report was "hemangioma."

The patient was discharged to the Out-Patient Department where she was subsequently followed. During the following month, the aural discharge ceased, and the remaining mass of tumor tissue

deep in the external auditory meatus became covered with epithelium.

Caloric tests performed at this time demonstrated active labyrinthine reactions on both sides. The fistula test was negative.

The patient was not seen again until January, 1949. She then reported to the out-patient department complaining that her right ear had started discharging again several weeks after her last visit and had continued to discharge since that time. There had also been several bouts of slight bleeding from this ear, and three days before, she had experienced a rather severe hemorrhage which she had controlled with cotton packs.

She was readmitted to the Infirmary on February 2, 1949.

General physical examination again was essentially negative. On local examination, the right external auditory meatus was found filled with a freely movable, smooth, grayish-white polyp-like mass. The fistula test was negative. With the left ear masked, she had no hearing in the right ear.

Mastoid X-rays were reported: "The left mastoid is normal. The right mastoid has a few cells showing increased density. There is no bone destruction."

A biopsy was taken by removing a portion of the mass in the left external auditory meatus. Profuse hemorrhage resulted, which necessitated tight packing of the canal with gauze.

The pathological report of this biopsy was "glomus-jugulare tumor."

On March 8, 1949, a postaural radical mastoidectomy with removal of the tumor tissue was performed.

On March 16, 1949, the packing was removed with only slight bleeding, and the cavity appeared to be in good condition. On March 27, 1949, she was discharged and was subsequently followed in the Out-Patient Department.

Early in April, 1949, it was noted that the cavity appeared to be filling in with granulations, but the bowl was almost dry. Subsequently, the bowl became smaller and entirely lined with smooth epithelium. It was completely dry, and remained so when she was seen 22 months following her operation. There had been no recurrence observed.

As of November 5, 1953, this patient had had no recurrence. The bowl was epithelized so that the middle ear was not visualized. This was four

years and ten months after the last report, at which time the bowl was healed, dry and epithelialized. Since this patient is being kept up to date, we may assume she has been free of recurring tumor six years since her operation.

Case 3: G. D., a 37-year-old white female, was first admitted to the Massachusetts Eye and Ear Infirmary on April 29, 1949, with a diagnosis of a mass in the nasopharynx.

Her previous history follows: In 1933, the patient developed a painless purulent discharge from her left ear. During the next several years, she had a progressive hearing loss in this ear, experienced recurrent exacerbations and remissions of the otorrhea, but she never had any pain, vertigo, nausea or vomiting. Treatment consisted of local cleansing of the external auditory meatus, the use of ear drops, and on several occasions "aural polypectomies" were performed.

On August 14, 1940, the patient had a left postaural radical mastoidectomy. Following this operation, she continued to have left otorrhea. On July 1, 1941, there was a revision of the radical mastoidectomy following which the patient had a complete peripheral paralysis of the left facial nerve. The cavity became dry, but the facial paralysis persisted.

In 1946, she began to have bouts of mild, easily controlled epistaxis. The nasal obstruction was such that she was unable to get any air through the left side of her nose, and the right side was almost completely blocked also.

When she entered the hospital, her general physical examination was normal.

On local examination there was a complete peripheral left facial nerve paralysis. The plastic opening into the left radical mastoid cavity was markedly stenotic, and the cavity was moist. It contained a small amount of polyp-like tissue. There was a well-healed left postaural scar. Anterior rhinoscopy was normal, but examination of the nasopharynx revealed a firm, round, smooth, grayish-white mass completely filling the left half of this space. The mass appeared to have its origin from the superior part of the fossa of Rosenmuller.

X-rays of the nasopharynx and temporal bones were reported: "There is a mass in the left upper part of the nasopharynx which is very suggestive of malignancy. The right mastoid is normal. The left mastoid is postoperative. There is destruction of the lower part of the petrous bone—below the cochlea—which appears to be involved."

On April 30, 1949, a biopsy was taken from the lower limit of the mass in the nasopharynx, which included approximately one-fifth of the visible substance of the tumor. A profuse postnasal hemorrhage resulted, which required packing of the nasopharynx and left nasal cavity.

The pathological report on this tissue was "angioma, suggestive of glomus tumor."

Two days after the biopsy was taken, all packing was removed without further bleeding.

On May 3, 1949, the patient was discharged from the Infirmary to the Out-Patient tumor clinic. Here, during the next few weeks, a rapid resolution in the size of the mass was observed, so that by the end of May, 1949, the entire nasopharynx appeared free of tumor, and only a denuded area high in the fossa of Rosenmuller on the left side could be seen. She had experienced no further epistaxis, and she was breathing easily through both sides of her nose.

On June 20, 1949, the patient was readmitted to the Infirmary for investigation of the polypoid-like mass previously noted in the left mastoid cavity. A biopsy of this tissue on June 22 was reported as "glomus-jugulare tumor."

On June 27, 1949, an endaural revision of the left mastoid cavity with removal of the tumor was performed.

Pathological study of the specimen obtained from the middle ear region confirmed the original diagnosis of glomus-jugulare tumor.

On February 21, 1951, the patient was discharged to the Tumor Clinic for irradiation. 3,000 r, 1,200 kv were ordered, using a 6 x 6 cm. field to both the auricular and nasopharyngeal sites. On March 6, 1951, the tumor was reported malignant by a house officer. By March 24, 1951, a total of 3,600 r in air had been given and two days later X-ray reaction was noted and the cavity was cleansed.

On April 6, 1951, the cavity was filling with gray mucoepithelial debris. Chloromycetin was ordered.

On April 26, 1951, there was no recurrence of tumor tissue.

On September 4, 1952, the patient was urged to undergo plastic repairs of facial deformity resulting from original involvement by the tumor tissue.

On September 9, 1954, there was no change noted in a small red area in the region of the orifice of the eustachian tube, and no recurrence

of the neoplasm after 3 years and 7 months. The patient thinks she is pregnant.

Case 4: H. M., a 58-year-old white female, was referred to me by her family physician on April 29, 1950, because of hemorrhage from her left ear for short intervals during the previous three days. She had experienced a full, itching sensation in the ear for the previous two years, and for three weeks had been able to touch something soft in her ear canal with her fingertip.

A grayish-white mass filled the inner three-fourths of her left ear canal. A biopsy of this mass, accompanied by free hemorrhage controlled by gauze packing, proved to be glomus jugulare tumor.

On May 26, 1950, a left endaural radical mastoidectomy with removal of tumor tissue from the middle ear, antrum and external canal was performed. On June 2, 1950, the cavity was grafted.

The patient continued to have an intermittent pulsating tinnitus in the left ear following her surgery. There was no visible recurrence of tumor tissue until September 29, 1953. She had not been seen for the previous eight months. She was found at this time to have definite recurrence of tumor tissue in the middle ear region of the cavity.

On October 12, 1953, the mastoid cavity was adequately exposed by incising between the tragus and helix, and, in spite of free hemorrhage, the presenting mass of tumor was rapidly removed by curettement and the bleeding controlled by packing. Primary grafting was done seven days later.

Following this procedure, the cavity became dry and completely epithelized. The pulsating tinnitus disappeared.

On July 13, 1955, gross tumor tissue in the floor of the middle ear portion of the cavity was again visible. Following the above described secondary technique, this tumor was removed and primary grafting was done at the same time. There has been no visible recurrence and the cavity has remained dry and covered with epithelium to the present time, the most recent inspection of the cavity being done March 23, 1956. She has no symptoms referable to the ear.

Summary

A general discussion of glomus jugulare tumors is presented. The lack of uniform agreement as to the proper nomenclature is stressed. Early and advanced signs and symptoms are described.

Various diagnostic techniques are related. The X-ray findings are not characteristic. A hypotympanotomy surgical approach as proposed by Shambaugh is described. The surgical approach originally presented by Weille and Lane is described. It was the technique employed in operating on the four cases that are reported in this paper.

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— ★ Editorial ★ —

THIS IS YOUR JOURNAL

A state medical journal should represent the entire state and not just the local area in which it is edited. This has always been the policy of the Journal of the Arkansas Medical Society in the past; this will be the policy of this editor in the future.

It will be the endeavor of this Journal to bring its readers a mixture of interesting articles on scientific subjects by both in state and out of state authors. The publication of good scientific articles keyed to the needs of the physicians of our state will continue to be the primary objective of the Journal. However, a state medical journal has many important secondary aims. High on this list is the dissemination of news and information about the component and state medical societies.

This transition in editorship will not affect the previous aims and ideals of the Journal but will continue them, and, it is hoped, with as much success. Constructive criticism and help from members of the Society is solicited. This is your Journal.

To the outgoing editor, Dr. Fount Richardson, thanks for a splendid performance in running the Journal.

Alfred Kahn, Jr., M.D.
Editor.

GLUCAGON

There is a factor in commercial insulin which instead of reducing the blood sugar elevates it. This factor has been attributed to the alpha cells of the pancreas, although absolute proof of this origin is not available; insulin has been proved to be produced in the pancreas beta cells.

It would superficially seem that glucagon is a physiological antagonist of insulin. This does not appear to be the case. Glucagon apparently raises blood sugar by the conversion of liver glycogen to glucose, which in turn is released into the blood stream. The exact mode of action of insulin is disputed. Van Itallie, (New England Journal of Medicine, Vol. 254, page 794, April 26, 1956), states that the most general agreement about the action of insulin is that it promotes the entrance of glucose into the cells. Van Itallie has reviewed the evidence for glucagon deficiency and excess clinically; for example, three related children with spontaneous hypoglycemia were partially pancreatectomized and found to have virtually no alpha cells. Excess glucagon has been

postulated by Zollinger and Ellison as a cause of peptic ulceration (Annals of Surgery, Vol. 142, page 709, 1955).

The importance of glucagon is unknown. It has been isolated in chemically pure form, and further intensive study will be necessary to determine its role in carbohydrate metabolism and the body's homeostasis.

Arkansas

TRAVELING

And Clipping Bits Here and There

\$1.7 million need for dormitories was approved for the University of Arkansas Medical School. Construction is expected to get under way this fall. Plans call for three buildings including a Student Commons.

Mayor Perry of North Little Rock has suggested that the city vote on the bond issue to support a North Little Rock hospital. A South Carolina firm is making a survey to see if a hospital is needed in North Little Rock.

The University of Arkansas will ask the Arkansas Legislature for \$5½ million to operate its new Medical Center in Little Rock during the 1957-58 fiscal year.

The Association of American Physicians and Surgeons Bulletin dated May 14, 1956: "Ask your Senators to read 'Social Security, Fact and Fancy,' by Dillard Stokes (only \$4.00, published by Henry Regnery Co., Chicago). After reading this book, in which Mr. Stokes documents that Social Security is inequitable, discriminatory and fraudulent, no honest, conscientious Senator or Representative would vote for expansion of the scheme."

ANNOUNCEMENTS

Application has been made to the Federal Civil Defense Administration for one of their emergency hospital units for the University of Arkansas School of Medicine. These units are available to the states for demonstration and training purposes.

Award of 34 unclassified life science research contracts in the fields of medicine, biology and biophysics was announced by the U. S. Atomic Energy Commission. The contracts were awarded to the universities and private institutions as part

of the AEC's continuing policy of assisting and fostering research and development in fields related to atomic energy as specified in the Atomic Energy Act of 1954. One of the awards was to H. J. Barnhard, University of Arkansas, to investigate, develop and evaluate radioisotopes for teletherapy.

The Conference of Presidents and Other Officers of State Medical Associations has compiled an excellent article concerning the disability freeze provision in the Social Security law. This is deemed of importance to members of the state medical profession:

"In recent months many physicians have heard from patients about the disability freeze provision in the Social Security law. This provision, added to the old-age and survivors insurance program in 1954, permits people who have prolonged total disability to apply to have their Social Security records frozen for the period of their disability. Thus, the time when they could not work and so had no earnings credited to their Social Security accounts does not count against them in determining their rights to benefits, nor the amount of benefits which will be payable to them at age 65, or to their families in case they should die.

Before a worker's Social Security record can be frozen, he has to meet certain work requirements. His Social Security record up to the time of his disability must show that he was in fact a worker, with a fairly regular and recent work history. In addition, he must be shown to have a medically determinable physical or mental impairment severe enough to keep him from engaging in any substantial gainful activity—one which has existed for more than 6 months, and is expected to last indefinitely or end in his death.

Securing the Medical Evidence of Disability

The medical evidence needed to establish the nature and severity of the applicant's disability, the date it began, and its prognosis comes from the doctor who has treated the worker and knows his case, or the hospital or institution in which the worker has been confined. A Medical Report form was designed to assist the physician in furnishing the needed medical evidence and to indicate the nature and extent of clinical detail which would be necessary. It is given to the applicant for the "disability freeze" and he is asked to have it filled out by the physician most familiar with his impairment. The form itself is modeled closely after the medical report used by major life insur-

ance companies in their disability claims work. In adapting it for use in the "freeze" program, the recommendations of a Medical Advisory Committee were closely followed. This committee, composed of well qualified representatives of the medical and related non-medical professions, gives advice and guidance to the Social Security Administration on the medical aspects of the "disability freeze" program.

If you have received this medical form to fill out for any of your patients, you are probably aware that the law makes the disabled worker responsible for seeing that medical evidence is submitted for him and for paying any costs involved. The law does not permit the Government to pay any costs in connection with securing the medical evidence needed for a determination of disability. You may also know that to insure the confidentiality of the medical evidence, the medical report form is not to be returned to the patient, but is to be mailed by the physician direct to the local Social Security office. This office, incidentally, is ready to furnish additional information to the physician concerning the medical report form and the operation of the disability freeze.

Determining Disability

Determinations as to disability based on the evidence submitted are made under an agreement with the Federal Government, by professional members of an agency of the State in which the applicant resides. In most States, this is the vocational rehabilitation agency. Since referral of disabled individuals for any rehabilitative services which might return them to gainful work is an important aspect of the program, each person applying for the Social Security disability freeze is told about the availability of vocational rehabilitation services.

On the professional team in the State agency at least one member is a doctor of medicine. The team reviews and evaluates all medical evidence assembled in the applicant's file, as well as such non-medical factors as age, education and occupational experience. Certain medical guides and standards, worked out with the advice of the Medical Advisory Committee, are used in the consideration of the medical evidence. But, although these guides and standards can be applied in most cases, they are not rigid and arbitrary. The final determination in each case is based on all the available facts on the individual's impairment and vocational history, and, there is consultation among physicians in any borderline situation.

Guides to Filling Out the Medical Report Form

No matter how good the standards, nor how considered the judgment of the reviewing team, the determination reached can be no sounder than the evidence upon which it is based. To make sure that he is providing sufficient medical evidence for a prompt and fair determination, the doctor will want to consider the following guides in filling out medical report forms for those of his patients who have applied for the Social Security disability freeze:

First, include sufficient clinical detail to enable the reviewing team to make a sound determination as to the severity and extent of the patient's current condition;

Second, give enough of the clinical history to provide information as to when the disability began, and when it became so severe as to keep the patient from working;

Third, describe the probable course of the condition from now on, so that a decision can be reached as to whether the impairment is likely to continue indefinitely, or end in death, or whether it is self-limiting, or remediable in the foreseeable future."

THINGS TO COME

Eye specialists from all the countries of the Western Hemisphere will gather in New York City, April 7-10, 1957, at the Hotel Statler, for the Fourth Interim Congress of the Pan American Association of Ophthalmology, according to an announcement by Dr. Brittain F. Payne, New York, President of the Association. The Congress will be held in conjunction with the annual meeting of the National Society for the Prevention of Blindness.

Examinations for qualified fellows of the International College of Surgeons will be held in Chicago, July 23-24 and October 29-30. Oral conferences will be held on August 6 and October 22. For details, write to the Secretary of the Qualifications Council, International College of Surgeons, 1516 Lake Shore Drive, Chicago 10, Illinois.

The New York Medical College, Flower and Fifth Avenue Hospitals, Division of Graduate Studies, Department of Graduate Pediatrics, will have a post-graduate course in pediatric allergy, under the direction of Bret Ratner, M.D., Professor of Clinical Pediatrics and Associate Professor

of Immunology. This will be held on Wednesdays, 9 a. m. - 4 p. m., November 7, 1956 - May 29, 1957, consisting of 30 sessions.

PROCEEDINGS OF SOCIETIES

The Arkansas Association of Tumor Clinic Staff Members met in the Garrett Hotel, El Dorado, Thursday, May 24, at 2:30 p. m. and the dinner session at 6 p. m. with three outstanding doctors in the cancer field as guest speakers. They were Dr. David M. Gould, Professor and Head, Department of Radiology, University of Arkansas School of Medicine, Little Rock; Dr. L. S. Snegireff, Associate Professor, Harvard School of Public Health, Boston, Massachusetts, and Dr. W. R. Mathews, Pathologist and Tumor Clinic Director, Confederate Memorial Hospital, Shreveport, La.

The Arkansas Medical Society has elected the following officers: Dr. Fount Richardson, Fayetteville, President; Dr. T. Duel Brown, Little Rock, President-elect; Dr. Joseph A. Norton, Little Rock, Vice President; Dr. Julius H. Hellums, Dumas, Vice President; Dr. Ben Saltzman, Mountain Home, Vice President; Dr. J. J. Monfort, Batesville, Secretary; and Dr. John W. Smith, Little Rock, Treasurer.

The Ouachita County Medical Society was addressed on May 4, 1956, by a group of officers from the University of Arkansas School of Nursing including Miss Julia M. Miller, Dean of the U. of A. Nursing School, and Miss Eleanor C. Shelton, Chief of Nursing Service of the University Hospital.

The Chicot County Medical Society has announced plans to hold Polio Clinics throughout Chicot County for children whose parents feel that they are unable to pay for these services.

The Craighead-Poinsett Medical Society met Wednesday night, May 1, at 6:30 in the Hotel Noble. Dr. Sam Shultz and Dr. DeSussure of Memphis spoke on "Neuro-Surgical Aspects," and Dr. Sam Sanders of Memphis spoke on "E.N.T. and Allergic Causes."

Dr. Morton J. Pendler of Memphis attended the Greene-Clay County Medical Society Wednesday night, May 9, 1956. Dr. Pendler spoke on prolapse of the rectum and acute gall bladder diseases.

Tyronza was host to the First, Second and Third Districts of the Arkansas Medical Society and had a distinguished group of out-of-town guests. The meeting honored present and past officers of the American Medical Association, the American Medical Association Auxiliary, the Arkansas Medical Society, the American Academy of General Practice, the Southern Medical Association, the American Dental Association, the American Pharmaceutical Association, the American Hospital Association, the Arkansas Education Association and the Memphis and Shelby County (Tenn.) Medical Society.

The Fourth Councilor District of the Arkansas Medical Society met in Pine Bluff May 17. A panel of guest speakers from the Southwestern Medical School of Dallas, Texas, participated in the program.

A heart institute was held Thursday, May 28, in the Camden Hotel, Camden, Arkansas, sponsored by the Ouachita County Medical Society and the Arkansas Heart Association. Speakers and resource people at the meeting were Dr. K. R. Duzan, pathologist, El Dorado; Dr. George R. Burton, radiologist, El Dorado; Dr. James E. Doherty, director of Division of Cardiology, University of Arkansas School of Medicine, Little Rock; Dr. Barney Briggs, Clinical Professor of Pediatrics, University of Arkansas School of Medicine, Little Rock, and Dr. Masauki Hara, associate professor of surgery, assistant professor of medicine, University of Arkansas School of Medicine, Little Rock.

PERSONAL AND NEWS ITEMS

Dr. John C. Wright, formerly of Water Valley, Mississippi, has joined the Harris Hospital and Clinic in Newport. Dr. Wright is a graduate of the University of Tennessee Medical School.

The Corning Research Hospital has been sold to Mr. M. B. Ainley.

Dr. Anderson Nettleship of the University of Arkansas School of Medicine has resigned as head of the Department of Pathology and as state medical examiner. He will remain as professor of pathology at the University.

An Arkansas Chapter of the American Trudeau Society, the medical section of the National Tuberculosis Association, was formed May 4, 1956, at Little Rock.

Dr. F. Walter Carruthers, past president of the Arkansas Orthopedic Society, was made President-elect of the Mid Central States Orthopedic Society at its annual meeting in Oklahoma City, Oklahoma, on April 20, 1956. Little Rock is to be the meeting place of the Society in 1957.

Ground was broken for a \$700,000 hospital Wednesday, May 9, at Conway. The Faulkner County Medical Society participated in the ceremony.

Contributions to the American Medical Education Foundation from the State of Arkansas during April 1956: Dr. Morton C. Wilson, Fort Smith.

A \$300,000 County Hospital has been planned for Yellville. This was announced by the Yellville city council on May 7, 1956.

Davis Goldstein of Fort Smith attended the meeting of the Oklahoma Dermatological Society May 5 and 6.

Members of the junior class at the University of Arkansas School of Medicine visited the Eli Lilly and Company April 22, 23 and 24, 1956, as guests of the company. They were accompanied by John P. Hammond, the Lilly representative in Little Rock.

Dr. J. F. Rowland of Hot Springs, the oldest living member of the Garland County Medical Society, celebrated his 86th birthday May 16. He is no longer practicing.

The following doctors were elected as officers in the Veterans of Foreign Wars: A. J. Forestiere, Post Surgeon, Harrisburg; Charles Bailey, Post Surgeon, Greenwood; and Fay B. Millwee, Commander, McCrory.

Prize winners in an essay contest conducted by the Pulaski County Medical Society have been announced. They are Peter E. Bogy, Catholic High, Little Rock; Miss Carol Reavis and Jimmy Standard, Central High, Little Rock. Prizes will be awarded at a ceremony to be arranged at a later date. The essays on the subject, "The Advantages of Private Medical Care," have been sent to the national office for judging, according to Dr. Gordon P. Oates, chairman of the contest committee.

Miss Mayme Roberson, Candler, North Carolina, has won the \$1,000 first prize offered by the

American Physicians and Surgeons' Freedom Programs, Inc., for her essay entitled "The Advantages of Private Medical Care." The fourth prize of \$25.00 was won by Peter E. Bogy of Little Rock. There will be an essay contest again in 1957. Inquiries regarding this contest should be addressed to Dr. Mal Rumph, Chairman, AAPS Essay Contest Committee, Suite 318, 185 North Wabash Avenue, Chicago 1, Illinois.

It has been announced that the Public Health Service has given preliminary approval for construction of a general hospital in Dallas County. The plans call for a 25 bed hospital to be located in Fordyce and the total cost will be \$273,873.

Dr. Harold Hawley will join Dr. Dwight Gray for practice at Dr. Gray's clinic in Marianna July 1. Dr. Hawley, who is formerly from El Dorado, will complete his internship next month at St. Francis Hospital in Wichita, Kansas. He did his premed preparation at the University of Arkansas.

A movie of a unique operation performed by Dr. Sam Jameson of El Dorado was shown at the convention of the American Urological Association in Boston. Dr. Jameson labeled the operation the first of its kind in medical history. The patient was a baby born with only one kidney. The operation relieved a drainage block in the kidney. Dr. David Yocum, also of El Dorado, filmed the operation.

Dr. Robert B. Robins of Camden participated in a panel discussion of "The Physician and Theology" with two ministers and a layman at the 106th annual session of the Medical Association of Georgia, in Atlanta, Georgia.

The Drew County Memorial Hospital has received several donations recently in memory of the late J. M. Gibson, a member of the hospital board, to be set up as a Memorial Fund for the future needs of this important institution.

TUBERCULOSIS ABSTRACTS

A Review for Physicians

ISSUED MONTHLY BY THE NATIONAL TUBERCULOSIS ASSOCIATION

REPRODUCED FOR ARKANSAS PHYSICIANS BY THE ARKANSAS TUBERCULOSIS ASSOCIATION

"A CHRISTMAS SEAL SERVICE"

THE NON-HOSPITALIZED TUBERCULOSIS PATIENT

By EDWARD T. BLOMQUIST, M. D.

American Journal of Public Health, February, 1956

Changing emphases and concepts in the tuberculosis problem in the United States have given rise to assumptions concerning the characteristics and status of tuberculosis patients who are not hospitalized, which are not supported by valid evidence. The Public Health Service has therefore undertaken to provide statistical data that will reliably describe the current status of known non-hospitalized tuberculosis patients in sample areas of the continental United States, so that health departments and other agencies may have specific information on which to plan.

The specific purpose of this undertaking is to study the characteristics of non-hospitalized tuberculosis patients who are in need of intensive public health supervision and to provide information on the types of care and services given them.

By means of sampling techniques 37 areas of the United States were selected. Together, these areas constitute an unbiased sample census of the number and status of known non-hospitalized cases for the United States as a whole. The 37 areas in the study had a total population of almost seven million and constitute portions of 24 states. No area was representative of any state; rather, the 37 areas combined are representative of the entire nation.

The latest information on the status of all tuberculosis patients in need of intensive public health supervision in 37 areas showed that slightly more than half (55 per cent) were hospitalized cases and 45 per cent non-hospitalized cases.

The original selection of cases was made from

the tuberculosis case register or the master index of reported cases. Cases for whom the health department had no information during the last five years were not included. Cases with disease activity questionable, undetermined, or not stated were included and particular effort was made to obtain their clinical status. The most recent information available regarding clinical status, medical supervision, and public health nursing and social services provided during the six-month period preceding the study date was obtained. This was done by reviewing clinic, public health nursing and hospital records, by conferences with private physicians and other personnel in hospital outpatient departments, Veterans Administration and social service agencies. Home visits were made when necessary.

In each area the cases included were those known to be active at home as of the study date. Total cases eventually included not only cases known to be active, but all current positive sputum cases regardless of clinical status or treatment recommended. Cases known to be taking drugs or to have drugs recommended were included regardless of status because such cases require substantial resources for their care and supervision.

Activity Classification of Non-hospitalized Tuberculosis Cases

	Number	Per cent
Total	3,159	100.0
Total active and presumably active	2,272	71.9
Active and probably active, seen in past year....	1,896	60.0
Presumably active, current activity status		
indefinite*	376	11.9
Arrested or inactive with drug therapy prescribed....	887	28.1

* These cases did not have any activity report within the 12 months preceding the study date, even though the latest diagnosis was active or probably active except for 70 cases classified as arrested with positive bacteriology.

Plainly, the situation revealed in this table has many implications for health departments and other agencies. The community has as great a responsibility for those cases outside hospitals as for those that are hospitalized. Because of the difficulties involved in supervising patients who are not in institutions, medical, nursing, and social services will be particularly challenged. Health departments will be concerned about the chances of spread of the disease because of the presence of active cases in their communities.

One-fourth of the cases had been known to health departments less than one year, three-fourths had been known for less than five years and 90 per cent had been known for less than ten years. Thus an overwhelming number of cases at home are in need of that kind of public health supervision required soon after diagnosis.

About half of these non-hospitalized cases that need intensive public health supervision are 45 years of age and older. The age distribution is similar to that of newly reported cases. Obviously our tuberculosis control problem is proportionately greater in the older age groups. The study cases showed that the ratio of males of all ages to females of all ages was 60 to 40.

In ages over 35 there are more than twice as many males as females. Only 3 per cent of the cases for whom this information was available were in the minimal stage of the disease, 41 per cent were moderately advanced and 46 per cent were far advanced. The bacteriological status of the active and presumably active tuberculosis cases was unknown or undetermined within the preceding six months in 48.2 per cent of the cases. Twenty-four per cent were bacteriologically positive and 27.8 per cent negative. These data point out clearly that the cases at home include: (a) a large proportion which are positive; and (b) an even larger proportion which do not have a sufficient bacteriological determination to permit the public health agency to give realistic advice regarding prevention of the spread of disease.

Availability of facilities for medical supervision is directly related to density of population. All of the eight large cities in this study provide clinic, public health nursing and social services, while almost one-half of the study population in rural areas have no clinic services available. Ten per cent have no public health nursing service, and 80 per cent have no social services other than financial assistance, provided by departments of public welfare. Organized home-care programs exist in only two of the cities included in this study, and they supervised only 1 per cent of the total load.

It has been assumed that patients under supervision at home have drugs prescribed. The study shows that only a third have both bed rest and drug therapy recommended. Of the 922 patients with no recommendations known for either drugs or rest, more than half are not under medical supervision, insofar as could be determined.

It is significant that for 25 per cent of the active cases no medical recommendations for or against hospitalization were available. Only 5.5 per cent of the cases were recorded as awaiting hospitalization, almost 30 per cent were not hospitalized because of medical preferences. Certain areas of incompleteness of our data probably reflect an inadequacy of communication among health department physicians, tuberculosis hospitals, and other agencies.

WOMAN'S AUXILIARY

The 32nd annual convention of the Woman's Auxiliary to the Arkansas Medical Society was held Monday and Tuesday in Little Rock, with the final session April 24 devoted to the election and installation of the slate of officers for the coming club year. Mrs. L. Gardner of Russellville was named president of the organization succeeding Mrs. John T. Gray of Jonesboro.

Other officers are Mrs. Jack Kennedy of Arkadelphia, president-elect; Mrs. Gordon Oates of Little Rock, 1st vice president; Mrs. Frank Adams of Hot Springs, 2nd vice president; Mrs. A. J. Forestiere of Harrisburg, 3rd vice president; Mrs. Kenneth Siler of Siloam Springs, 4th vice president; Mrs. Erner Jones of Little Rock, recording secretary; Mrs. L. A. Whittaker of Ft. Smith, publicity secretary; Mrs. Louis Draeger of Danville, corresponding secretary; Mrs. Mason G. Lawson of Little Rock, treasurer; Mrs. C. W. Garrison of Little Rock, historian, and Mrs. Howard Stern of Pine Bluff, parliamentarian.

Fifty dollars was donated to the American Medical Educational fund by the Medical Auxiliary of Sebastian County.

BOOK REVIEWS

Dictionary of Dietetics. Rhoda Ellis, Ph.D., Instructor of Foods and Nutrition, Department of Home Economics, Brooklyn College, New York. Pp. 152. 1955. \$6.00. Philosophical Library, Inc., Publishers.

Dr. Ellis has written a very readable book on dietetics. It attempts to give an easy to understand and easy to read definition of many common food substances and dietary factors. In addition, it gives a good deal of general dietary information and in this sense is a good deal more than a mere dictionary. There are a number of tables placed throughout the book. These are very helpful in preparing diets.

This book should be of interest to physicians, medical students, dietitians and lay persons who are interested in dietetics.

Neuroses in Clinical Practice. Henry P. Laughlin, M. D., Assistant Clinical Professor of Psychiatry, George Washington University School of Medicine. W. B. Saunders Co., Philadelphia, Pa. 1956.

This book is well written and easy to read.

It has chapters on various types of neuroses and these include: anxiety, intrapsychic mechanisms of defense, phobic reactions, conversion reactions, dissociative reactions, depression, fatigue reactions, over concern with health reactions, obsessive compulsive reactions, and traumatic neuroses. There is an excellent discussion on the illusory gains of emotional illness.

Of particular interest to physicians who have not had intensive psychiatric training is the glossary of psychiatric terms in the back of the book.

This book is recommended as an easy to read reference book for practicing physicians and medical students.



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ESOPHAGEAL HIATAL HERNIA

MARVIN E. JOHNSON, M.D.*

The problem of when and how to treat hiatal hernia has been clarified considerably in recent years. The amount of information concerning the anatomy and physiology of the normal and abnormal esophagogastric junction has increased with the result being a more rational approach if these factors are given the proper consideration.¹ To some extent the mistakes in previous methods of treatment have been necessary steps in the evolution of these concepts since the complications that followed were responsible for focusing attention on truly significant factors. This paper is admittedly not the final answer but is instead the offering of a program of treatment which presently seems logical in the light of the pathologic processes involved. Criteria for surgical treatment will undoubtedly become more exact and refinements in surgical technic will be forthcoming.

Incidence

The increasing incidence of hiatal hernia is probably associated with the aging of the population. Hiatal hernia is the second most frequent abnormality noted in upper gastrointestinal X-ray studies with an incidence of 9%.² It has been found as frequently as 70% in the older age groups. This type of hernia constitutes about 75% of all diaphragmatic hernias.

The exact number and the percentage that cause trouble cannot be stated exactly, however, there is another statistical approach that throws some light on the importance of the disease. This analysis concerns the high percentage of cases of esophagitis which are reported to have an associated hiatal hernia. Cross and Kay reported 75% of 55 cases, Stewart reported 63% of 66 cases, and Schmidt reported 158 cases out of 170 cases to have the hiatal hernia with clinically significant esophagitis.^{3 4 5} These figures leave no doubt as to the need for considering the entity seriously.

Diagnosis

The proper treatment of a disease is dependent upon its recognition. To find a hiatal hernia we must be led by the symptomatology into doing gastrointestinal X-ray studies and esophagoscopy. It is certainly true that there are some cases which are wholly without symptoms and are discovered only as incidental findings. The majority probably have some symptoms if the patient is questioned carefully.

The symptoms apparently arise mainly from three main causes, namely regurgitation of gastric secretions, distension of the lower end of the esophagus and mechanical derangements involving the enlarged hiatus and the traversing organ. The most frequent and significant symptoms are as follows. Dysphagia which is often described in terms of the food seeming to stick in the lower esophagus. Burning substernal or epigastric pain, regurgitation and belching are common. The substernal pain is often described as coming on with stooping or as awakening the patient if he is sleeping on the right side. In such a case relief is obtained in the upright position or by taking milk or alkaline solutions. Radiation of the pain up the chest and into the neck, jaw, arm or back is not uncommon. Dyspnea beyond that accountable because of some gastric protrusion into the thorax has been emphasized."

Once the possibility of a hiatal hernia is considered X-ray Studies of the upper gastrointestinal tract must be made including films made with the patient in the Trendelenburg position. All cases should have repeat films if the first study is negative but the symptomatology quite marked. Esophagoscopy and gastric acidity studies should then be carried out. Esophagoscopy is essential because it is the only accurate method for determining the presence of esophagitis and of evaluating its severity. The findings will vary from mild redness of the mucosa to severe reactions manifested by bleeding, ulceration and stenosis. In

*Staff, University of Colorado School of Medicine.

the absence of stenosis the opening usually will be patulous, and there will be absence of any angular distortion at the entrance to the stomach.

The classification of the type of hiatal hernia present has now been fairly well arranged into four groups. First the truly congenitally short esophagus which is very rare and exists only when the gastric mucosa extends up the esophagus for an abnormal distance as a developmental mistake. Cases have been described where the gastric mucosa extended to the level of the cricoid cartilage. This is a special entity, and we must not apply the term to those cases wherein the esophagus is shortened by muscle contraction or cicatricial contraction secondary to esophagitis.

The second variety is the sliding type in which the cardia and upper end of the stomach move up into the chest with a straightening of the esophagogastric junction. The general appearance of this defective arrangement can be likened to a bell or inverted funnel. This is the most common type, and Allison has reported that 170 of 206 hiatal hernias were of this type.⁷

The third type is the paraesophageal or rolling type in which a portion of the anterior wall or fundus of the stomach protrudes up into the chest along the side of the esophagus. In a pure example of this type, the esophagogastric junction will remain in a relatively normal location below the diaphragm.

The fourth type is designated as the mixed type in which there may be a combination of these features. For a more complete explanation of embryology and classification the articles by Allison and Barrett are recommended.

Differential Diagnosis

At this point it must be emphasized that finding a hiatal hernia should not encourage one to forget about all other diseases. There are times when the hernia is apparently symptomatic, and its repair is followed by a failure of recovery. Further studies then disclose the presence of cholelithiasis or some other disorder with similar symptoms. Or it sometimes happens that a conservative regime is tried for symptom relief and, after failure of the treatment, it is discovered that the patient actually had a carcinoma of the stomach or pancreas. Such errors as this emphasize the necessity for careful work-up including X-ray and esophagoscopy, and in my mind emphasizes the need for a more aggressive surgical attitude when there is any reason to doubt the simplicity of the situation. As already stated

the diseases most likely to be confused with it or to occur concomitantly are those of the gall bladder, heart, pancreas and colon. Appropriate studies of these organs should never be neglected.

Anatomy

The changed concept of the anatomy in the area of the esophageal hiatus as emphasized by Allison has been one of the most important advances in the study of this disease. This and subsequent studies put the surgical repair of the lesion on a more sound basis. They also resulted in a better appreciation of the altered function which caused the reflux of the acid peptic secretions which brought about the esophagitis. These features of structure and function are best considered together.

For some reason wrong concepts arose concerning the anatomy of the esophageal hiatus especially in regard the crura of the diaphragm. A look at Spalteholz's Atlas of Anatomy shows a reasonably accurate picture. A number of books since have portrayed the inaccuracy of the right crus forming the right border and the left crus forming the left side of the hiatus. Careful anatomical studies by Allison, Madden and Carey and Hollinshead have shown that the esophageal hiatus is formed entirely by the right crus with no contribution or only a minimal number of fibers from the left crus.^{7,8,9} This point is critical in explaining why everyone doesn't have hiatal hernia and is necessary knowledge if a proper surgical repair is to be done. The right crus forms a sling about the esophagogastric junction and pulls this point to the right and downward and compresses the esophagus from side to side with each contraction of the diaphragm on inspiration. It will also be noted that the weak point is posterior to the esophagus so that separation and enlargement of the hiatus will occur in that direction by separation of the fibers longitudinally rather than transversely in the anterior location. It is readily deduced that repair of an enlarged hiatus will be most effectively carried out by approximating the muscle fibers by sutures placed posteriorly instead of indiscriminate suturing anteriorly or laterally. In certain types of defects an anterior or lateral suture may be necessary, however, the heart of the repair lies in the handling of the fibers posteriorly.⁸ The increased percentage of successful repairs obtained by this technic have substantiated this concept.

No definite intrinsic demonstrable sphincter has been proved to exist at the lower end of the esophagus. This makes the fact of continence in

this location quite remarkable. The factors which appear to work in combination to accomplish this feat are: the right crus, as described above, maintaining the acute angle of entry of the esophagus into the stomach; the phreno-esophageal ligament aiding in this fixation; the oblique muscle fibers of the stomach and the elevation of the fundus by the air bubble accentuating the angle; the valve-like action of the gastric mucosa at this angulated juncture; and probably by an inherent sphincteric function of the terminal esophagus.¹⁰ It has been repeatedly demonstrated that if the normal anatomical relations are maintained fluid can be injected into the esophagus, and it will enter the stomach easily. If, however, the fluid is injected at the pylorus, it will not traverse the stomach and enter the esophagus except under extreme pressure. Additional elevation of the fundus of the stomach will increase the pressure required to render the esophagogastric junction incompetent. Any measure which alters the normal anatomy so that the angle is made less acute will allow reflux at much lower pressures. The problem of reflux of gastric secretions in sliding hiatal hernia are thus logically explained on the basis of the loss of the acute angle of entry of the esophagus into the stomach.

The phreno-esophageal ligament deserves some additional comment because of its functional and surgical importance. This structure has been studied anatomically by Peters and shown to contain elastic fibers which ultimately anchor into the distal esophagus thereby functioning as one of the important mechanisms for holding the esophagogastric junction below the diaphragm.¹¹ This ligament is a continuation of the diaphragmatic fascia on the under surface of the diaphragm which is a continuation of the transversalis fascia. Peters has demonstrated upward and downward extensions of this ligament before it attaches usually within one or two centimeters of the esophagogastric junction.

These, then, are the structures which account for maintaining the junction in its normal position and preventing reflux except in special situations such as vomiting. The defects present in hiatus hernia are, in summary, stretching or distortion of the muscle fibers forming the hiatus in the diaphragm, stretching of the phreno-esophageal ligament and redundancy of the peritoneum usually with the sac located antero-laterally in the paraesophageal type. These defects allow the esophagogastric junction to move up into the chest, and the acute angle is destroyed allowing reflux of the secretions which can cause esoph-

agitis whether they are acid or alkaline. Digestive juices will attack the esophagus more readily than any other part of the alimentary canal.¹²

Treatment

There are three courses of action open in hiatal hernia once it has been discovered. No treatment whatsoever may be needed if there are no symptoms. If there are symptoms, then the patient may be treated either medically or surgically. It is important to recognize both methods as components of a continuing therapeutic plan rather than as competing methods. The indications for surgery at the present will very likely prove to be too cautious. However careful evaluation of all cases will prevent any real harm to any patient even if this is so. For the present it may be said that more cases are being treated medically than surgically. Blalock³ in his discussion of Stewart's paper quotes Allison as saying that in approximately one-third of the cases of hiatal hernia he has seen he has recommended surgery. Most authors agree that cases with minimal or no symptoms should be so handled. Poor surgical risks whose symptoms can be controlled medically should have that regime.

An adequate medical program consists of an ulcer type diet, antacids, antispasmodic drugs and sleeping with the head of the bed elevated 8 to 10 inches. The patient should maintain the erect position for one hour after meals. Any obesity should be treated by weight reduction to reduce intra-abdominal pressure. Stenosis of the lower esophagus requires dilatation using preferably the Jackson-Plummer dilators passed down over a previously swallowed string.

If there is inadequate response to this routine as shown by progression of symptoms or the complications of esophagitis such as bleeding, ulceration, stenosis or perforation or incarceration of any organ, then surgical therapy of an appropriate nature should be applied.

The essential points in good repair are excision of the peritoneal sac, shortening of the phreno-esophageal ligament with fixation to the diaphragm and reduction in the size of the hiatus preferably by non-crushing sutures placed posteriorly in the fibers of the crus of the diaphragm. Allison, Stewart, Barrett and Madden have all described detailed methods for doing this operation. The left thoracic approach is the most popular and seems to give the best exposure for a correct anatomical repair. If there is special need for an abdominal approach, however, it may

be used. Cooley, in his discussion of Stewart's paper states that he prefers this approach.⁴ The essence of this type of repair is the restoration of the normal anatomical features which prevent the entrance of the stomach into the chest with a lessening of the esophagogastric angle which permits reflux of the acid peptic secretions.

A more difficult problem is the case in which esophagitis has progressed to an extent where complications such as those seen in gastroduodenal ulcer have occurred, namely bleeding, stenosis and perforation. In this type of case the repair should be accompanied by a gastric resection which reduces the acid pepsin factor and allows adequate drainage of the stomach which is also a favorable feature in preventing reflux of secretions.

In the event that the esophagogastric junction cannot be brought down below the diaphragm because of the shortening of the esophagus by the inflammatory reaction, a gastric resection is the procedure of choice. A left phrenic nerve crush may be an aid in this situation.

Stenosis of a degree that is irreversible by dilatation and the standard operation which prevents reflux will require resection of the lower end of the esophagus. Past experience with resection of the cardia has shown that the loss of the sphincter mechanism results in severe esophagitis whether the new continuity is esophagogastric or esophago-jejunal using a loop of jejunum. Experimental work as well as clinical application indicates that a segment of jejunum may be used satisfactorily for replacement if the anastomosis is end-to-end into a segment of jejunum which is isoperistaltic and isolated from the main stream of intestinal secretions by a Roux Y procedure. Whether or not the alternative of substitution of a segment of jejunum between the esophagus and stomach will be widely applicable and wholly satisfactory in this type of case remains to be seen.^{1,2}

Massive bleeding may require balloon tamponade or immediate surgical intervention. There is now reason to believe that some cases of so-

called spontaneous perforation of the esophagus may have hiatal hernia with esophagitis and ulceration with perforation as the cause. Perforation of the esophagus requires immediate surgical repair.

In some cases there may be a degree of persistence of symptoms even after adequate surgical correction of the hiatus hernia. If X-ray studies fail to prove a recurrence of the hernia, it will usually be found that moderate medical treatment will control symptoms adequately.

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THE DIAGNOSIS AND TREATMENT OF EXTERNAL INFLAMMATION OF INFANTS' EYES

A. E. BRALEY

Professor of Ophthalmology, University of Iowa School of Medicine

Ophthalmia neonatorum has been such a dreaded disease for so many generations that many studies have been made on the conjunctival sac of infants during the post-natal period. Ophthalmia neonatorum for many years meant that the ophthalmia was produced by an infection from the gonococcus. Infections of the eyes of newborn babies with the gonococcus were so severe that it was not unusual for both eyes to be lost from this infection. The blind schools in most states were filled with children who were blind because of gonorrheal ophthalmia. For the past twenty years, however, gonorrheal ophthalmia has become a rare disease. At the present time, it is difficult to find a person under twenty years of age who has had gonorrheal ophthalmia. Even as late as 1942 gonorrheal ophthalmia did occur, but the therapy with the sulfonamides was so effective that severe damage to the eyes rarely occurred.

Purulent conjunctivitis of newborn infants still is an important post-natal sepsis. O'Brien¹ states that ophthalmia is a nuisance and is the commonest form of neo-natal minor infection. The instance of conjunctivitis in newborn infants varies with hospitals, running from 1.5 per cent to 6 per cent. Ormsby² conducted an extensive study in Toronto, Canada. This study extended from October, 1950, until September, 1954. It included 8,418 births. He found gonorrheal ophthalmia in nine infants. The staphylococcus accounted for the largest number of infections of the newborn, but the number of staphylococci was not increased by the prior use of 1 per cent silver nitrate instilled at the time of birth. He feels that the Crede method of silver nitrate drops is relatively harmless and is an effective prophylactic measure for gonorrheal ophthalmia of the newborn. There was one case of gonorrheal ophthalmia in 3,125 infants treated with 1 per cent silver nitrate prophylaxis. With Sulmefrin (sulfathiazole, sulfadiazine and dl-methamphetamine) there were three cases of gonorrheal ophthalmia. In the remaining, 2,020 infants received no prophylaxis and in this group there were five cases of gonorrheal conjunctivitis. For the past five years we have used penicillin ointment at birth instead of 1 per cent silver nitrate and we have found no cases of gonorrheal ophthalmia. The previous

five years infants were treated with 1 per cent silver nitrate and there, likewise, no cases of gonorrheal ophthalmia.

A number of authors³ state that bacterial contaminations of the newborn conjunctiva is more common after instillation of 1 per cent silver nitrate. Some of these have been confused by the so-called chemical conjunctivitis of newborn infants. It is not unusual for the lids of infants to become slightly edematous with redness of the eyes after any prophylaxis. When this is associated with discharge, staphylococcus aureus is the most common, but staphylococcus albus may also be found.

An interesting study was conducted by Grunberger and Kofler.⁴ These authors theorized that the baby's conjunctiva was contaminated at or by delivery. They took cultures from the mother's vagina and conjunctiva of 53 women immediately after delivery and compared these with the conjunctiva cultures of babies after birth. Staphylococcus aureus and staphylococcus albus was the commonest bacteria, but escherichia coli was also grown. The baby's conjunctiva was less likely to be contaminated than one would expect. Staphylococci, both aureus and albus, was discovered in the baby's conjunctiva while streptococci and escherichia coli were extremely rare. Crede's prophylaxis did not increase the number of bacteria in the conjunctiva. Cultures of the conjunctiva were taken on the second and fifth days from the baby.

Lack of tears in the newborn baby may be an important factor in the development of early conjunctivitis. This is particularly true when there is an obstruction of the naso-lacrimal duct. The organism which may get into the conjunctival sac is not properly washed into the nose and a conjunctivitis may result or a lacrimal conjunctivitis may also ensue. It is the feeling of some obstetricians that it is important to wipe the mucous from the baby's eyes as the head emerges. This is a means of prophylaxis against bacterial contamination and also against lacrimal sac obstruction which may occur from the mucous being forced down into the lacrimal apparatus. This is not a widely accepted measure and possibly it should be stressed. It was first pointed out to me by Jeffrey.⁵

Conjunctivitis of the newborn usually develops on the third to the fifth day of life. They respond fairly satisfactorily to local therapy; however, local therapy in itself may produce some edema of the lids and slight redness of the baby's eyes. I prefer to use ophthalmic solutions since there is less manipulation. The forceful attempt to open the eyelids may produce scratches of the skin, with redness and edema.

One form of ophthalmia is a virus disease called Inclusion Blennorrhea or inclusion conjunctivitis. Ormsby² found seven cases of inclusion conjunctivitis in his large group of births. He said that there was no effective prophylaxis against inclusion conjunctivitis. This disease usually begins on the seventh to the fourteenth day of life as a purulent conjunctivitis which may be quite severe. It responds to the wide spectrum of antibiotics and to sulfonamides given by mouth. Terramycin and aureomycin seem to be most effective as local therapy. The diagnosis is made by scrapings from the conjunctiva. The clinician should suspect inclusion conjunctivitis if the disease begins about the day of discharge from the hospital, when this is between the seventh and the fourteenth day. Another factor that may be helpful in diagnosis is that the lower lid appears to be markedly swollen in contra-distinction to the upper lid and when slight pressure is applied to the lower lid the entire conjunctiva everts outward exposing a ruga surface.

Penicillin prophylaxis used during the past year at our hospital has not prevented the development of an occasional case of inclusion conjunctivitis. Scrapings from the conjunctiva stained with giemsa demonstrate the typical inclusions in the conjunctival epithelial cells.

Tearing and conjunctivitis frequently are associated in the newborn and during the first few months of life. Conjunctival smears and cultures should be done on infants' eyes in order to establish a diagnosis. Conjunctival smears and cultures should always be obtained when pus persists in the baby's eyes. These are done even when you suspect that the naso-lacrimal apparatus may be defective. Hopkins⁶ feels that there are many causes of tearing in the newborn and infections are likely. He believes that many infants' eyes with blocked naso-lacrimal duct can be relieved by simple massage over the lacrimal sac. He treats the disorder conservatively, irrigating the sac with penicillin and giving penicillin systematically so long as there is pus in the sac. Subsequent probing may be necessary.

When a conjunctivitis has been present for more than two weeks in a newborn infant, it is advisable to gently irrigate the nasal lacrimal apparatus. This can usually be done during feeding period. A bottle of formula, and a few drops of local anesthetic in the eye, will usually allow the physician enough time to irrigate the naso-lacrimal apparatus. Penicillin, 2,500 units per cc, is sometimes effective in treating a stubborn conjunctivitis in the newborn baby. The lacrimal apparatus should be gently irrigated with the penicillin solution. When tearing and purulent discharge continue for a period of time, and no solution passes into the nose it is advisable to pass a probe. Probing of the duct should be done very cautiously. Cassady⁷ advocates early probing instead of prolonged massage. He uses a No. 23 gauge straight one-inch cannula which is attached to a two cc syringe. The syringe is filled with a saline solution. This straight cannula is inserted into the puncta and the lacrimal sac irrigated. If there is an obstruction the cannula is then used as a probe and with the aid of the firm probe and some irrigation, the obstruction at the lower end of the nasal lacrimal duct is broken through by the usual maneuver of probing the sac.

Hurd⁸ reported an interesting group of twenty-six cases of congenital obstruction of the naso-lacrimal duct. His observation showed that the affected eye usually teared from birth and was frequently associated with some degree of conjunctivitis. In his series of cases he had two which were acute phlegmonous inflammations of the sac. Both of these cases began at birth and it was Hurd's opinion that the infection started at birth. He probed both of these cases of acute phlegmonous infection and cured the condition. Of the twenty-six patients followed by this author, nineteen were subjected to probing. All were cured without complication. Five of the patients were cured by simple massage and two of the patients failed to return for observation. All of the five patients who responded to conservative therapy were under five months of age.

When it is necessary to probe the naso-lacrimal duct of a newborn infant I feel along with a number of other authors that it is easier to use the upper puncta than to tear the delicate lower puncta. I use a local anesthetic in the eye and then evert the upper lid. This exposes the upper puncta. The upper puncta is then dilated with a sterile safety pin. Infants under two months of age can usually be probed during time when a combined local anesthetic is used. Extreme care must be exercised in passing the probe to avoid

making a new passage. When the probe is passed correctly and carefully one usually meets a very slight resistance at the lower end of the naso-lacrimal duct. At times a slight amount of pressure may be required to pass the probe through the obstruction. When the probe passes through the obstruction it may suddenly rupture. The end of the probe may pass through the hard palate where it may be discovered in the mouth. This small defect in the hard palate heals promptly, in a matter of hours. After passing the probe I feel that it is important to irrigate the naso-lacrimal apparatus to remove all traces of blood. No blood or debris should remain in the lacrimal sac or in the naso-lacrimal duct.

There has always been a considerable controversy regarding the early probing vs. conservative therapy of dacryocystitis of the newborn. Some ophthalmologists feel that the tears help open the naso-lacrimal duct. Waldapfel⁹ states that there is a solid rod of epithelial cells present between the naso-lacrimal sac and the nose which forms the naso-lacrimal duct. This rod will form a tube sometime after birth. He based his assumption on injection of iodized oil or lipoidal and taking X-ray pictures of the area.

While obstruction of the naso-lacrimal duct is commonest, occasionally there is an atresia of the puncta. I have seen a number of cases in which epiphora was pronounced, in babies, and was due to an absence of both the lower and the upper puncta. These cases have been very instructive. In nearly all of these cases of atresia of the puncta a small dimple can be seen in the skin at the lid margin which may be opened by probing or by using a fine knife. Once they are opened by this procedure they usually remain open. In one interesting patient I was unable to find any evidence of a dimple in the lid border for either the upper or the lower puncta. I elected to open the lacrimal sac through a skin incision and irrigate through the sac in order to see where the fluid would go. In this instance the naso-lacrimal duct was opened and the fluid drained readily into the nose. I was able to pass a probe backward from the sac through the canaliculi to a point near the lid border which I opened. The upper puncta and canaliculus remained open but the lower canaliculus has subsequently closed. In this instance, certainly the naso-lacrimal duct was a tube, the sac was well formed and both canaliculi were well formed. The puncta alone were not developed.

From this case I would be inclined to believe that the tears play a relatively unimportant role in opening the naso-lacrimal apparatus.

Nordlow and Vennerholm¹⁰ reported one hundred cases of obstruction of the lacrimal apparatus. Eighty-four per cent of these patients developed epiphora during the first month of life. Of the hundred patients that they presented only four had atresia of the puncta.

Summary

The diagnosis and treatment of external inflammation of infants' eyes requires careful clinical and laboratory examination. Smears and cultures of the conjunctiva should be taken before treatment is instituted. A careful clinical examination is also indicated. The clinical examination should include irrigation of the naso-lacrimal apparatus when a conjunctivitis persists. If a specific organism is grown in culture, then adequate antibiotics or chemiotherapeutic treatment should be instituted. When tearing is present or if the naso-lacrimal apparatus does not open on conservative therapy, early probing should be done. The naso-lacrimal duct should preferably be probed before three months of age. Probing may be attempted at any time up to several years of age, but after the age of three or four probing is usually not successful. When probing is not successful, and purulent discharge persists, a dacryocystorhinostomy should be performed.

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"THEOLOGY AND MEDICINE"

R. B. ROBINS, M.D., Camden *

Mr. McGill, Members of the Panel,
Ladies and Gentlemen:

I feel quite honored to be the lone physician on this panel with two distinguished American clergymen and two laymen to make comments on the subject of "Religion and Medicine." I don't know how this happened unless it is on account of a statement which I made in this same auditorium several years ago when I said that I didn't feel that the psychiatrist's couch would ever take the place of the church in solving the problems of a frustrated society.

I have been impressed by a statement made some time ago by a great American, General Omar Bradley, when he said: "Our knowledge of science has clearly outstripped our capacity to control it. We have too many men of science; too few men of God. We have grasped the mystery of the atom and rejected the Sermon on the Mount. . . . The world has achieved brilliance without wisdom, power without conscience. . . . We know more about war than we know about peace, more about killing than we know about living. This is our twentieth century's claim to distinction and to progress."

The present tempo—increased tempo—of our everyday living is putting a great strain on our physical and mental resources. We have gone through two wars and we hear rumors of possible coming wars—we see differences in ideologies over the world and we live in a state of fear and insecurity. The patient becomes sick today under all these strains of present day living and then the illness adds personal fears and anxieties. We medical men realize that in caring for our patient who has a physical illness we are also dealing with an individual whose physical illness has a bearing upon his mind and his spirit. Our objective must be to render total care—not just physical care. This is the reason we medical men welcome all men of God of whatever creed to help us in the care of the sick. We are a Christian nation and we realize that religion enters into consideration with every patient. Medicine and religion can make an extremely powerful alliance in the restoration of a sick person to healthful and useful living. The chaplain has a very definite and important role in the hospital.

About 50 per cent of the people who go to physicians have emotional trouble as the basis of their illness rather than organic illness and in many who do have organic illness there is usually a tremendous emotional factor. Emotional illness might be called spiritual sickness—it is sickness of the soul.

The patient is a human being and not just another case. He or she deserves sympathy, kindness and human understanding. A few kind words, a little smile, a manifestation of interest and concern, a genuine desire to help, a little love and understanding on the part of the doctor and the nurse can add much to the spiritual benefit of the patient.

As a doctor I have noticed that in times of crisis—when suffering and fear faces people—even individuals who are often considered irreligious will turn to God in prayer. I have noticed this many times with the patient in the emergency room at the hospital or with his family and friends at the time when death is approaching their loved one. I believe everybody prays.

I feel that every hospital should have a chapel—a quiet and reverent place where people can go for contemplation, meditation and prayer. Many of our hospitals are being built today without this facility. Some hospitals have built little chapels with revolving altars so that they may be equally adapted for use by those of the Catholic, Jewish or Protestant faiths. These, I believe, are called interfaith chapels. The idea strikes me as a very fine one.

The matter of telling the patient the whole truth is a question that arises many times and probably should be discussed by this panel. I think this subject cannot be answered in a categorical manner. It depends upon circumstances. In one instance it may be the proper thing to do and in another not the thing to do.

There is a point in serious illness when nature graciously and mercifully dulls the mind. Sir William Osler said that most people die as they were born, unconscious of what is happening.

In conclusion, let me say that it seems to me that it is up to the press, Mr. McGill, the clergy and all media of communication—radio, TV, the press, the pulpit—to discontinue dramatizing the shortcomings and failures of a very few people in the medical profession to the detriment of thousands of devoted and unselfish doctors and nurses

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who labor many hours often late in the night and at great personal sacrifice for the comfort and health of humanity. They serve as ministers in a degree to the soul as well as healers of pain and regulators of disturbed anatomy and physiology. Only a very few doctors forget the first sentence in our Code of Ethics which states that financial remuneration is of secondary consideration; service to humanity is the first consideration.

I think that it should be routine in our medical schools in this country to have their senior classes hear lectures from priest, rabbi and the Protestant minister outlining the requirements of their various faiths in serious illnesses. I want to compliment the Medical Association of Georgia for devoting this little portion of their program to this discussion. I think other medical societies might take note of this for some of their future programs.

There is a lot that you ministers can do for us as physicians. We doctors know that there is considerable art in medicine. I am sure there must be considerable art in the ministry too. The minister must use common sense. He must know what to say and what not to say; what to ask and what not to ask; when to pray and when not to pray; when to stay and when to leave.

I must now take leave as far as my statement is concerned and in so doing may I say that it has been a pleasure to participate in this panel discussion of such an important subject.

MEDICINE IN THE NEWS

The 1956 edition of New and Nonofficial Remedies is just off the press by the J. B. Lippincott Company. It is more complete than previously.

The University of Arkansas School of Medicine has opened the teaching hospital. Public tours were made on June 11. It is expected that the classroom building will be opened about October 1.

The Boone County Hospital was recently listed among the hospitals provisionally accredited by the Joint Commission of Accreditation.

Six Arkansas hospitals will receive donations in the allotment of Ford Foundation funds. The Arkansas hospitals are Warner Brown Hospital, El Dorado; Community Methodist Hospital, Paragould; Helena Hospital, Helena; Children's Convalescent Center, Jacksonville; Springdale Memorial Hospital, Springdale, and St. Michael's Hospital, Texarkana.

The Clark County Memorial Hospital and the Polk County Memorial Hospital have been ap-

proved and given Full Accreditation by the Board of Commissioners of the Joint Commission on Accreditation of Hospitals.

House Committee Starts Hearings on U. S. Employee Health Insurance

Hearings have been started by the House Post Office and Civil Service Committee on a thrice-revised bill to set up a system of catastrophic insurance for U. S. civilian workers. The bill (H. R. 11630 & 11633) would also authorize payroll deductions for basic health insurance, provided the procedure is found to be feasible by the comptroller general.

Congress Appropriates Record \$170.4 Million for PHS Research

Congress has approved and sent to the White House a record-breaking appropriation of \$170.4 million for medical research work of the National Institutes of Health. The total is estimated at 80 per cent more than the research programs had to spend in the current fiscal year, which ends Saturday, June 30.

	Fiscal 1956 (Ending June 30, 1956)	Fiscal 1957 (July 1, 1956 - June 30, 1957)
Research Appropriations:		
National Cancer Institute.....	\$24,828,000	\$48,400,000
Mental Health Activities	18,000,000	35,100,000
National Heart Institute.....	18,778,000	33,300,000
Arthritis & Metabolic Diseases	10,740,000	15,800,000
Neurology & Blindness	9,861,000	18,600,000
Allergy & Infectious Diseases....	7,580,000	13,200,000
Dental Health Activities	2,136,000	6,026,000

The Month in Washington

June 8, 1956

Washington, D. C.—Before the end of the year hundreds of thousands of dependents of military personnel, living in all parts of the country, should be receiving their medical care from private physicians and in private hospitals under the new program authorized this year by Congress. While Defense Department has not yet completed regulations to implement the act, the law itself lays down the basic principles governing the program.

The House Armed Services Committee first attempted to decide on a system or systems for furnishing private care, through Blue Cross, Blue Shield, arrangements with state medical societies, commercial insurance or "home town care," such as Veterans Administration successfully employs. But the committee gave up on the problem, and Congress finally tossed it to the Secretary of Defense by stating in the bill that he shall " . . . after consultation with the Secretary of Health, Education, and Welfare . . . contract for medical care for such persons . . . under such insurance, medical service or health plan or plans as

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A CHRONICLE



he deems appropriate." A Defense Department task force now is attempting to decide how to work out the contracts.

Although several groups of dependents will be entitled to medical care, only wives (or husbands) and children of men on active duty will be certified for civilian care. The others will be admitted to military medical facilities on "availability of space" basis. While generally spouses and children of active duty personnel will have a choice of private or military care, there is this limitation: The Secretary of Defense may designate certain areas where private care will not be authorized, if in his opinion those areas have military facilities adequate to care for the service families.

Dependents will be required to pay the following charges: For care in military facilities, subsistence and "in-hospital" charges (set by Secretary of Defense and currently \$1.75 per day); for private care, the same fees or the first \$25, whichever is the larger.

The time limit on private care is 12 months, but if hospitalization still is required after this period the dependent will be protected. In this case the Defense Department will transfer the dependent to a military facility or will make direct payment to a private hospital.

Although regulations will spell out limitations and authorizations in more detail, the law makes the following provisions:

Care in military facilities to include: 1. Diagnosis, treatment of acute medical and surgical conditions, treatment of "contagious diseases," immunization and maternity and infant care. 2. Hospitalization for nervous and mental disorders, chronic diseases or elective medical and surgical treatments **but only in "special and unusual cases"** and for not more than 12 months. This would be provided at the discretion of the Secretary of Defense. Dental care not authorized except in unusual cases, while abroad or at remote stations in the U. S.

Private care will include: 1. Hospitalization in semi-private accommodations up to one year for each admission, including all necessary services and supplies furnished by hospital. 2. Medical and surgical care incident to hospitalization. 3. Complete obstetrical and maternity service, including prenatal and postnatal care. 4. Physician or surgeon's services prior to and following hospitalization for bodily injury or surgery.

From the Federal Medical Services Newsletter:

Non-Service-Connected Beds

The AMA has pointed out, in explaining its policy concerning the care of veterans with non-

service-connected illnesses, that we had enough beds twenty years ago in VA hospitals to take care of all our service-connected cases. Additions during the past two decades have merely added beds for the non-service-connected. Here is some substantiating testimony, from Mr. Higley, Administrator of Veterans' Affairs.

Testifying before the House Committee on Veterans' Affairs at a hearing on "Replacement and Modernization of Veterans' Administration Hospitals" February 8, 1956, Mr. Higley said:

" . . . if you have an extra bed you are not using, and if you have a veteran, nonservice connected, who needs hospitalization, and he cannot afford to pay for that hospitalization, then we are automatically to take him in. That is the law as it exists today. But it is predicated entirely, you will note, on if we have extra beds. That is the whole essence of it.

"Now, we find ourselves today in the situation of operating about 100,000 patients in our own hospitals, and on any given day over a third of them are service connected and two-thirds of them are nonservice connected. We do not need to go into a lot of detail, but that is approximately the situation.

"So, just putting it bluntly, that is the situation. If you add on any appreciable number of beds, either as a big addition or as a big hospital, you are building beds for nonservice connected, whereas the law as it exists today actually says you will only take in nonservice connected when you have extra beds, when they are beds that you do not need for service connected.

"So I think there is a fundamental question that has got to be answered here pretty soon. Is it the will of Congress and the American people that we will build beds for nonservice connected? Because if you add on any hospital, you can pretty well argue that you are pretty much adding beds on for the nonservice connected. Because we have very ample space, far more than we need at the present time, for all service connected." (Page 2287, official report of hearing.)

The Social Security Bill is still before the Senate; a showdown has been put off but it is still possible that this bill will be voted on before adjournment.

Mr. Eugene R. Warren and Mr. Bill V. McFarland have requested that any physicians report to them if a "Medicine Show" opens in their territory. Mr. Warren was instrumental in helping close a recent medicine show at Monticello, Arkansas.

★ Editorial ★

THE PROBLEM OF THE PSYCHOSES

ALFRED KAHN, JR., M.D.

Medical research is full of fascinating and rewarding surprises. We have been accustomed to explain the workings of the brain in terms of hereditary endowment and environment. Neurological diseases that altered the functions of the brain are readily accepted as explaining abnormal behaviour when visible evidence, either gross or microscopic, could be demonstrated. However, many abnormal patterns of thought and behaviour are not associated with visible evidence of disease. In recent years chemical research has begun to afford interesting leads into some not yet understood areas of neuro-psychiatry.

Fabing (Neurology, Vol. 5, p. 603, 1955) in the presidential address to The American Academy of Neurology has reviewed part of this field. Some of his information is summarized here.

For example, it has been found that almost all the hallucinogens which can cause schizophrenia or simulated schizophrenia are indoles. Some may produce a schizoid state with doses as small as 0.1 mg. Drugs in this group are mescaline and lysergic acid diethylamide (LSD-25) from vegetable sources and adrenochrome from animal sources. The question that now arises is can a metabolic defect in our bodies produce schizophrenia.

Fabing suggests there are four possible sites of metabolic error which could contribute to schizophrenia: the abnormal formation of tryptamine from tryptophan, the abnormal formation of bufotenine from serotonin, the abnormal formation of adrenochrome from adrenalin, and the formation of abnormal porphyrins.

The evidence that psychopathic states are the result of disordered chemistry is presumptive and by analogy, and yet it is difficult to explain why in a given set of environmental condition one individual will develop a psychosis or neurosis and another with a seemingly similar hereditary endowment will not. It is not far fetched to feel that the difference is an ill understood chemical disorder.

LETTERS TO EDITOR

1306 West 44th Terrace
Kansas City, Missouri
June 12, 1956

Dr. J. J. Monfort
Secretary, Arkansas Medical Society
North Arkansas Clinic
Batesville, Arkansas

Dear Dr. Monfort,

I will complete my internship at Kansas City General Hospital June 30, 1956. I have made application for a Reserve Army Commission and for active duty.

I find myself faced with the possibility of being unable to enter the Army until late summer, and consequently am most anxious to learn of the possibility of employment until I do go.

I have made a few inquiries among physicians in Arkansas regarding employment during the summer months, and have received negative replies. I was referred to you by Dr. Peter O. Thomas of Little Rock, who stated that you may possibly be able to help me.

I am interested chiefly in helping a doctor who wishes to take a vacation and needs someone to handle his practice while he is away. There are many opportunities for this kind of work here in Missouri, but I do not have a Missouri license and do not wish to obtain one as I do not intend to establish myself here permanently.

I would appreciate any information that you may have regarding the opportunities in Arkansas for summer work of any kind.

Sincerely,

James H. Abraham, M.D.

ANNOUNCEMENTS AND THINGS TO COME

The Mid-Continent Psychiatric Association is holding its annual meeting in the resort town of Hot Springs, Arkansas. Members of the Arkansas Medical Society are cordially invited to this meeting. The time: Friday, Saturday and Sunday, September 21, 22 and 23, 1956. The place: Velda Rose Motel, Hot Springs, Arkansas.

The World Medical Association, composed of 700,000 doctors from 60 nations, solicits your membership. Subscriptions should be sent to Dr. Louis H. Bauer, Secretary-Treasurer, U. S. Com-

mittee, Inc., World Medical Association, 10 Columbus Circle, New York 19, New York.

Forthcoming Annual Sessions of The American College of Physicians

1957

38th Annual Session, Boston, Mass, April 8-12.

Richard P. Stetson, M.D., F.A.C.P., 203 Commonwealth Ave., Boston 16, Mass., General Chairman.

Walter L. Palmer, M.D., F.A.C.P., University of Chicago Department of Medicine, Chicago 37, Ill., President.

Edward R. Loveland, 4200 Pine St., Philadelphia 4, Pa., Executive Secretary and General Mgr.

1958

39th Annual Session, Atlantic City, N. J.

April 28-May 2.

James F. Gleason, M.D., F.A.C.P., 7 S. Oxford Ave., Atlantic City, N. J., General Chairman.

From August 19 to August 23 the IV International Congress on Diseases of the Chest of the American College of Chest Physicians will be held in Cologne, Germany. The patronage over the Congress has been taken over by Federal Chancellor Dr. Konrad Adenauer.

Society Leaders Invited to AMA's PR Institute

Concentrating on just one big public relations meeting this year, the American Medical Association announces plans for its 1956 PR Institute to be held August 29-30 at Chicago's Drake Hotel. This two-day session will combine the socio-economic discussions formerly reserved for the PR Conference with the idea exchanges usually on the Institute program.

Tentatively scheduled are discussions on: Science Fairs, legislation, membership indoctrination, tested public relations activities, and the outlook for next year. In addition, a half day will be devoted to a radio-television workshop on local programming.

Urology Award

The American Urological Association offers an annual award of \$1,000 (first prize of \$500, second prize \$300 and third prize \$200) for essays on the result of some clinical or laboratory research in Urology. Competition shall be limited to urologists who have been graduated not more than ten years, and to hospital internes and residents doing research work in Urology.

The 21st Annual Congress of the United States and Canadian Sections, International College of Surgeons, will be held in the Palmer House, Chicago, September 9-13. The meeting will be attended by surgical celebrities from many foreign countries as well as from all parts of the United States and Canada.

Arkansas

TRAVELING

And Clipping Bits Here and There

SUMMARY* of "Smoking Patterns and Epidemiology of Lung Cancer in the United States: Are They Compatible?" a paper appearing in the June 1956 issue of the Journal of the National Cancer Institute, by William Haenszel and Dr. Michael B. Shimkin, National Cancer Institute, Public Health Service, U. S. Department of Health, Education and Welfare, Bethesda 14, Maryland.

*For additional information, contact Mr. R. B. Callahan, OL 6-4000, Ext. 2241, June 17, 1956.

A new study by scientists of the National Cancer Institute shows that the entire cigarette-smoking population of the United States appears to be subject to the same high risk of lung cancer which was found in earlier studies of selected groups of smokers and non-smokers.

This conclusion is reached by William Haenszel, Head of the Biometry Section and Dr. Michael B. Shimkin, Chief of the Biometry and Epidemiology Branch, National Cancer Institute. Their report, "Smoking Patterns and Epidemiology of Lung Cancer in the United States: Are They Compatible?" appears in the June issue of the Journal of the National Cancer Institute.

This study represents the first attempt to test the consistency of data found in a number of studies relating to the risk of smokers developing lung cancer, smoking habits of Americans, and the general distribution of lung cancer in the population. In general, consistency was noted.

The male-to-female ratio of lung cancer deaths, now 5 to 1, represents the highest sex ratio known for any major disease. The adjustment for smoking history brought the sex ratio for lung cancer into line with those observed for other causes of death.

The authors further indicated that if smoking is, in fact, a cause of lung cancer, the following two trends should prevail: the rate of deaths from lung cancer for females will rise by 1965, in accordance with the trend to smoking at earlier ages among women; and the increasing rate of deaths from lung cancer for males will slow down by 1965.

Adjustment for different smoking patterns in rural and urban populations accounted for only a part of the urban-rural differences in lung cancer mortality. In the opinion of the authors, this urban-rural discrepancy represents a real finding and is a manifestation of multiple environmental factors in lung cancer.

Data from the Census Bureau survey, taken in February 1955, show a definite trend toward cigarette smoking at earlier ages among males. About 61 per cent of men aged 25-34 had smoked cigarettes regularly by age 21, while only 41 per cent of the 55-64 age group had taken up regular smoking at that age.

The survey data also show that only a few women were smoking cigarettes regularly before 1930. In the 25-34 age group, 29 per cent were regular smokers by 21, while only 2 per cent of the 55-64 age group reported to have smoked regularly at that age. All sources of data used in the study agree that lung cancer incidence and deaths are higher in urban than in rural areas, particularly for males.

New AMA Pamphlets on Family Doctor

Expert advice concerning the importance of periodic health examinations is capsuled in an attractive new pamphlet recently published by AMA's Council on Rural Health. Titled "Check and Know," this 16-page booklet points up the advantages of having a complete physical check-up at regular intervals and keeping an accurate health record of all members of the family. Another pamphlet, designed as a companion piece, discusses the reasons for having a family doctor and for having a sound doctor-patient relationship. The second pamphlet, also 16 pages, is entitled, "A Member of the Family—Your Doctor."

PERSONALS AND NEWS ITEMS

Dr. Leston E. Fitch, El Dorado, and Dr. J. F. Kelsey, Fort Smith, have been certified by the American Board of Obstetrics and Gynecology.

Dr. L. H. McDaniel, Tyronza, was recently notified of his election to the Board of Trustees of Erskine College of South Carolina.

William C. Threlkeld, Doctor of internal medicine and pediatrics, is a new member of the staff at Rodgers Hospital.

Dr. P. Gordon ReMine has joined the surgical staff of the Cooper Clinic, Fort Smith.

Oliver I. Bollinger, West Memphis planter, and Mrs. Bollinger have donated approximately four acres of land to the Crittenden Memorial Hospital. Value of the gift has been estimated at about \$5,000.

A former Clarksville man has received an appointment as medical economist to the staff of the State University College of Medicine, Syracuse, N. Y. He is Dr. Howard Lee Bost.

Members of the Pulaski County Medical Society made a four hour tour of the Little Rock Air Force Base June 14. The tour was conducted by Lt. Col. Donald M. Kennett, a member of the Society.

Dr. Ewin S. Chappell of Little Rock was recently elected President of the Arkansas Psychiatric Society. Other new officers are Dr. Robert Carnahan, President-elect; Dr. N. T. Hollis, Secretary, and Dr. John E. Peters, Treasurer, all of Little Rock.

Dr. Ralph Joseph, Walnut Ridge, who has been on active duty with the U. S. Army for the past two years, returned to the private practice of medicine in mid-June.

Dr. William Paul Gray of Batesville has been elected governor for the American College of Chest Physicians for the State of Arkansas. Dr. Gray previously had served as secretary of the Arkansas Chapter.

At its meeting June 6th, the Craighead-Poinsett County Medical Society elected Dr. J. H. McCurry of Cash as the outstanding doctor of that medical society.

Dr. J. S. Priddy has resumed his medical practice in Green Forest. Dr. Priddy has been on the disabled list for the past several months with a lung ailment.

Dr. O. W. Davenport is taking a leave of absence from his practice in Bauxite to further his training in the field of Obstetrics and Gynecology at Jackson Memorial Hospital in Miami, Fla.

The physicians in Mena, in cooperation with the Polk County Memorial Hospital, have been selected to participate in the training of Senior students of the University of Arkansas Medical School. The purpose of the training is to show

the students about small town practice, so that more might settle in a small town. The training period of each student in Mena will be one month.

Dr. Davis W. Goldstein of Fort Smith and Dr. Alvin W. Strauss, Jr., of Little Rock attended the AMA Convention in Chicago June 11-15.

PROCEEDINGS OF SOCIETIES

Dr. Katharine Dodd, head of the Department of Pediatrics at the University of Arkansas Medical School, spoke on "Clinical Aspects of Polio and Other Virus Diseases" at a meeting of the Pulaski County Medical Society June 5, at the University of Arkansas School of Medicine.

The Craighead-Poinsett County Medical Society met June 6th in Jonesboro. The program was furnished by E. M. Cooper who discussed a variety of interesting X-rays. Drs. Blanton and Webb discussed diseases of the eye and illustrated their talks with photographs.

The Southeast Arkansas Medical Society meeting was held at McGehee June 16th at the Graystone Hotel. Dr. Howard Rands, Dumas, President, presided. Speakers were Dr. E. C. Gillespie and Dr. James Stuckey of Little Rock.

The American Medical Association's 105th annual meeting, held in Chicago, June 11-15, drew a total registration of 27,115 persons, including 9,969 physicians.

At the AMA meeting in Atlantic City last year the total registration was 27,458, including 11,546 physicians. At the previous AMA Chicago meeting, held in 1952, the total registration was 24,368 and of this number 11,716 were doctors.

Hospital accreditation, evaluation of graduates of foreign medical schools, the private practice of medicine by university faculty members and federal aid to medical education were among the major policy matters taken up by the House of Delegates. Since a summary of House actions was mailed direct from Chicago on the final day of the meeting to all members of the House, and since the proceedings will soon appear in the AMA Journal, there is little need to review all the business transacted.

Dr. David B. Allman, Atlantic City, is the new president-elect of the AMA. A member of the Board of Trustees since 1951 and also chairman of the Committee on Legislation, Dr. Allman in June, 1957, will succeed Dr. Dwight H. Murray,

Napa, Calif., who took office at a beautiful and impressive inaugural program in Chicago's Civic Opera House.

The AMA has proposed a marked shortening in the Principles of Medical Ethics. The proposed principles are as follows:

1. The prime objective of the medical profession is to render service to humanity with full respect for both the dignity of man and the rights of patients. Physicians must merit the confidence of those entrusted to their care, rendering to each a full measure of service and devotion.

2. Physicians should strive to improve medical knowledge and skill, and should make available the benefits of their professional attainments.

3. A physician should not base his practice on an exclusive dogma or a sectarian system, nor should he associate voluntarily with those who indulge in such practices.

4. The medical profession must be safeguarded against members deficient in moral character and professional competence. Physicians should observe all laws, uphold the dignity and honor of the profession and accept its self-imposed disciplines. They should expose, without hesitation, illegal or unethical conduct of fellow members of the profession.

5. Except in emergencies, a physician may choose whom he will serve. Having undertaken the care of a patient, the physician may not neglect him. Unless he has been discharged, he may discontinue his services only after having given adequate notice. He should not solicit patients.

6. A physician should not dispose of his services under terms or conditions which will interfere with or impair the free and complete exercise of his independent medical judgment and skill or cause deterioration of the quality of medical care.

7. In the practice of medicine a physician should limit the source of his professional income to medical services actually rendered by him to his patient.

8. A physician should seek consultation in doubtful or difficult cases, upon request or when it appears that the quality of medical service may be enhanced thereby.

9. Confidences entrusted to physicians or deficiencies observed in the disposition or character of patients, during the course of medical attendance, should not be revealed except as required by law or unless it becomes necessary in order to protect the health and welfare of the individual or the community.

10. The responsibilities of the physician extend not only to the individual but also to society and demand his cooperation and participation in

activities which have as their objective the improvement of the health and welfare of the individual and the community.

TUBERCULOSIS ABSTRACTS

A Review for Physicians

ISSUED MONTHLY BY THE NATIONAL TUBERCULOSIS ASSOCIATION

REPRODUCED FOR ARKANSAS PHYSICIANS BY THE ARKANSAS TUBERCULOSIS ASSOCIATION

"A CHRISTMAS SEAL SERVICE"

TUBERCULOSIS STUDY IN MUSCOGEE COUNTY, GEORGIA

By GEORGE W. COMSTOCK, M.D.

American Review of Tuberculosis, February, 1956

Fast-tempo community-wide roentgenographic surveys were developed with the hope that identification and treatment of many cases of asymptomatic tuberculosis would markedly improve control of tuberculosis in the surveyed community. During the past decade, with emphasis on this case-finding technique, the tuberculosis death rate has fallen markedly while the reporting of new cases has remained at a high level. The relation of fast-tempo surveys to these phenomena is still in question, and their effectiveness in helping to bring tuberculosis under control has been most difficult to measure.

One way to estimate the usefulness of a chest roentgenographic survey is to study the tuberculosis deaths in a community after the survey, particularly when tuberculosis mortality can be compared among the persons who were and were not examined. It is reasonable to suppose that tuberculosis mortality among participants and non-participants is related to the prevalence of tuberculosis among these groups and, consequently, might help to decide whether persons with tuberculosis participate in surveys to the same extent as do other members of the population.

In 1951 such an analysis was made of the tuberculosis deaths in Muscogee County, Georgia, for the three and one-half-year period after a community-wide chest roentgenographic survey. The important findings of that study may be summarized as follows: Mortality rates for both whites and Negroes decreased but slightly following the survey. Tuberculosis mortality among the surveyed and non-surveyed did not appear to be significantly different, leading to the inference

that persons with tuberculosis participated in the survey program to approximately the same extent as did the general population. Death rates among persons with normal survey films revealed an unusually wide discrepancy between the two races: for white persons a low rate—approximately three per 100,000 population per year; for Negroes a rate thirteen times greater. The report tentatively concluded that subject to confirmation "a complete survey in a white population followed by adequate isolation might be so effective that for some time the tuberculosis control program in the community would consist chiefly of the provision of medical care and follow-up services to persons identified as tuberculous in the survey. For Negroes, it would seem that this would not be sufficient."

At the time of the 1951 analysis, it was recognized that the number of deaths and the length of the follow-up period were not sufficient and the study was extended for an additional three and one-half years.

The community-wide survey of 1946 and the subsequent follow-up procedures conducted by the Muscogee County Tuberculosis Study had three notable features. First, the special census of 1946 made it possible to identify, among the 95,518 residents whether or not they obtained roentgenograms in the survey and allowed the identification of persons moving to Muscogee County subsequent to the 1946 program. Second, the roentgenographic screening during the seven years following the survey was quite extensive, including a second community-wide survey and eight surveys of special groups and a chest clinic screening program comprising about 20,000

roentgenograms each year. Even more important was the relationship with hospitals and private physicians which ensured that virtually all suspected cases of tuberculosis became known to the health department. Third, careful attention has been given to the verification of all reported tuberculosis deaths and to the investigation of all deaths in which tuberculosis might have been involved.

Pre-survey and post-survey mortality rates:

Tuberculosis mortality in Muscogee County is reported for three and one-half-year periods: one before the survey and two following it. From the first to the second period, the rate of decline in mortality among both races was somewhat less for Muscogee County than for the United States as a whole. From the second to the third period, the rate of decline among whites was greater than the national rate whereas for the Negroes it was approximately the same. In all periods, the mortality rates for both races were appreciably lower than those for the nation as a whole.

The difference in subsequent tuberculosis mortality between the portions of the population who had had chest films and those who had not was estimated. For both races, excluding those known to have had tuberculosis before the survey, the adjusted average annual tuberculosis mortality rates during the seven-year period following the survey were 24 per 100,000 among Muscogee County residents who had a survey film and 22 per 100,000 for those who did not. For whites, the rates were 8 and 10; and for Negroes, 63 and 50 respectively.

It seems likely that persons who had had survey films would have had their tuberculosis detected at a stage more favorable for treatment than those who were not examined. Consequently, one would expect a lower mortality among those who had had chest films than among those who had not. However, the mortality rates for whites were essentially the same in both groups, whereas Negroes with subsequently fatal tuberculosis were more concentrated among the surveyed population. These findings lend no support to the hypothesis frequently advanced that persons who have reason to believe they may have tuberculosis tend to avoid participation in chest roentgenographic surveys.

A comparison of the death rates among whites and Negroes with "positive" and "negative" survey films showed that the mortality rates for "survey positive" cases are rather high: 340 per 100,000 for whites and 1,490 for Negroes. In

other words, approximately 2.5 per cent of the whites and 10 per cent of the Negroes with evidence of tuberculosis in their survey films have died of tuberculosis. It is obvious that tuberculosis is a serious disease even when discovered by examining an ambulant and largely asymptomatic population.

Among the population with normal survey films, the mortality rate for whites still remains low: 3 per 100,000 persons per year indicating that fatal tuberculosis was uncommon during the next seven years among white persons whose survey chest films were read as normal.

In striking contrast, the Negro rate is 45 per 100,000 persons per year for "survey negatives," 15 times that of the white "survey negatives," and essentially the same as that for the general Negro population in the last three and one-half years of the study period. This is strong evidence that a single survey of a Negro population, even when followed by an intensive tuberculosis control program aimed primarily at the cases discovered in the survey, is not sufficient to bring the disease under control.

An analysis of the deaths from tuberculosis in Muscogee County, Georgia, leads to the conclusion that a complete roentgenographic survey of a white population followed by adequate isolation of the infectious cases could reduce the tuberculosis control program, for several years at least, to the provision of medical care and follow-up services for persons identified in the survey as tuberculous. For a Negro population, it appears that case-finding programs should be repeated more frequently.

WOMAN'S AUXILIARY NEWS

The Medical Auxiliary of the Southeast Arkansas Medical Society held their meeting in the parlor of the Greystone Hotel, McGehee, Monday night, June 16th. Mrs. Howard Rands, President, presided over the routine business.

BOOK REVIEWS

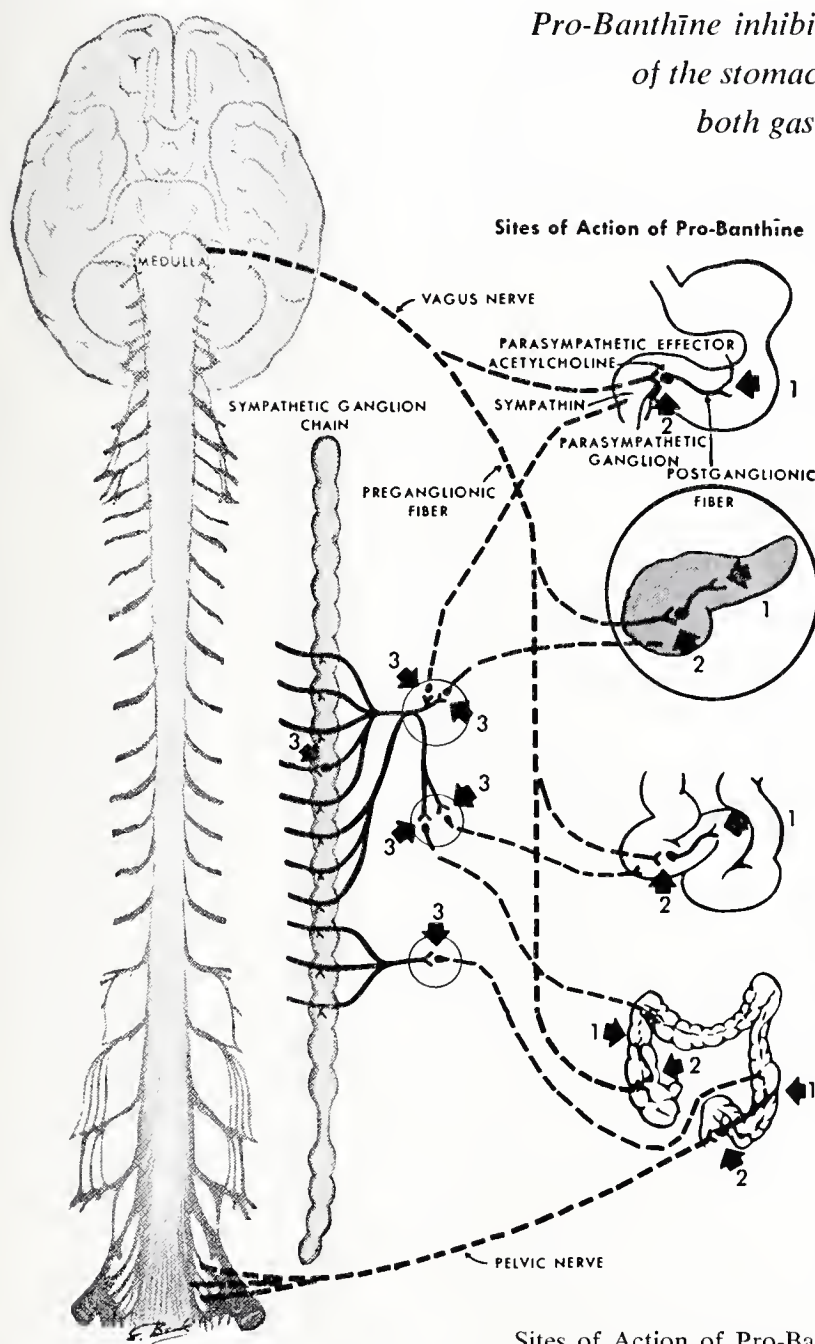
Personal Health Record: Carl A. Dragstedt, M.D., Ph.D., Northwestern University Medical School. Pp. 64. \$1.00. The Military Service Publishing Co., Harrisburg, Pa.

This small booklet is a very worthwhile investment for everyone. It is a log of symptoms. It includes personal data, medical history, records of treatments and immunizations, and the findings of medical examinations. A book such as this, if properly used, will enable the patient to supply the physician with much more accurate medical data than he would usually get.

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Schwartz and Hinton achieved⁴ dramatic relief of pain in four of six patients with acute hemorrhagic or edematous pancreatitis within twenty to thirty minutes after giving Pro-Banthine intramuscularly. A dose of 15 to 30 mg. may be repeated¹ parenterally at intervals of six hours.

Pro-Banthine bromide (brand of propantheline bromide) also has proved highly effective in the therapy of peptic ulcer, hypertrophic gastritis, diverticulitis, biliary dyskinesia, ileostomies and genitourinary spasm. G. D. Searle & Co., Research in the Service of Medicine.

1. Jones, C. A.: Arch. Int. Med. 96:332 (Sept.) 1955.
2. Zollinger, R. M.: Postgrad. Med. 15: 323 (April) 1954.
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Sites of Action of Pro-Banthine. The principal site of action of Pro-Banthine is on the parasympathetic system where it exerts a dual action while exerting a single and lesser action on the sympathetic system: (1) parasympathetic effector; (2) parasympathetic ganglion; (3) sympathetic ganglion (see arrows).

SEARLE

A Doctor's Marital Guide for Patients: Bernard R. Greenblat, B.S., M.D. The Budlong Press, Chicago, Ill. 1956. \$1.50. Pp. 88.

Dr. Greenblat's book is a concise paperbound informative guide on sexual matters. It includes chapters on attitudes toward sex, reproduction, the sexual organs, the sexual act, etc. There are discussions of conception, pregnancy, and conception control. The book is well organized and includes a glossary of terms. A Catholic edition is also published.

AK

The Management of Menstrual Disorders: C. Frederic Fluhmann, B.A., M.D., C.M., Clinical Professor of Obstetrics and Gynecology, Stanford University School of Medicine, San Francisco. Pp. 350. Illustrated. 1956. \$8.50. W. B. Saunders Company, Philadelphia.

This book is a continuation and enlargement of the author's previous book on menstrual disorders, and not a revision of his 1939 work.

It is interestingly written, beginning with a history of the concepts and taboos of menstruation, and proceeding through the hormonal, neural, and organic aspects. The menarche and the climacterium are fully presented.

Some expressive terms relating to the glandular functions are introduced; the adoption of some British terms, not in common use in this country, is urged. The discussion of pre-menstrual tension is useful; that of the hygiene of menstruation is weak and equivocal. The final chapter on clinical usage of commercial preparations of sex hormones, presented in outline form, should prove a useful, quick guide for therapy. A fairly comprehensive bibliography follows each chapter, and the book is well indexed.

The general practitioner, for whom the book is purported to be written, should find comparable information, in briefer form, in any standard textbook on gynecology. The specialist will probably have most of the information. However, the student, general practitioner, or specialist who enjoys beautiful expression will review this book with pleasure.

R. E. Lesh

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MOBILIZATION OF THE STAPES FOR RESTORATION OF HEARING IN OTOSCLEROTIC DEAFNESS

HAROLD G. TABB, M.D.,* New Orleans, Louisiana

Not since Lempert's¹ original publication in 1938 of his one stage fenestration operation has a procedure caused so much interest, excitement and controversy among otologists as the stapes mobilization operation for deafness secondary to otosclerosis.

This operation is based on a direct approach to the site of pathology where otosclerosis has produced a fixation of the stapedial footplate in the oval window, and consists of restoring movement to a previously immobile stapes.

The degree of stapedial fixation is reflected in the hearing acuity since normal hearing depends on a freely moveable ossicular chain ending in the oval window. When movement is impaired in the stapes, a mechanical obstruction in the ossicular chain is produced and deafness develops. The deafness being directly proportional to the loss of stapes mobility. As impairment progresses to complete stapedial fixation, a maximum conductive loss of 50 to 60 decibels may develop. During this time the bone condition level may remain perfectly normal and indicates the cochlear potential or the level at which the hearing may be restored if the ossicular chain again becomes completely mobile.

It is this practical approach based on logical thinking with the possibility of restoring, not just serviceable, but normal physiologic hearing that lends merit and consideration to the stapes mobilization operation.

It has been said that there is nothing new under the sun and mobilization of the stapes proves no exception. Numerous ear surgeons in the past have attempted to mobilize the stapes to restore hearing but all resulted in failure and for various reasons the operation was abandoned over fifty years ago, giving way to the idea of creating a new window in the labyrinth which was developed

and made practical by Lempert¹ in recent years. His ingenious fenestration operation which by passes the seat of pathology has been employed successfully for years to restore hearing in suitable cases of otosclerosis.

For determining suitability of cases for the fenestration operation, Rosen² in 1952 began testing the stapes for fixation prior to the operation employing a technique suggested by Lempert³ for tympanosympathectomy. During the course of this testing procedure, movement in the stapes was reestablished in some of these patients and they heard immediately; a dramatic improvement of hearing on the operating table. This experience prompted the use of stapes mobilization primarily to improve impaired hearing in otosclerosis, and in 1953, Rosen³ reported his first cases by this transtympanic approach.

The operative technique of mobilizing the stapes which I have been using during the past year is essentially that of Rosen⁴ with modifications of my own and others notably Scheer⁵ and Kos.⁶

The patient is admitted to the hospital the night before operation so that the ear can be surgically prepared and covered with a sterile mastoid dressing. Orders consist of a regular diet, penicillin intramuscularly and nembutal grains one and one-half at bedtime.

On the morning of operation a light breakfast is given and the penicillin repeated. Luminal grains two by hypo is given one hour before operation and Demerol milligrams 50 approximately 30 minutes before.

Local anesthesia is used with headlight illumination, a binocular loupe, and a large, glare-proof ear speculum. The procedure is explained to the patient emphasizing that there is no pain after the initial injections, that a grating sound may be heard, and that they must remain absolutely still. Approximately one cc. of a mixture of three parts

*From the Department of Otolaryngology, Tulane University of Louisiana School of Medicine.



Fig. 1. Skin incision on posterior wall of external ear canal.

2 percent Zylocaine and one part adrenalin 1:1000 is injected subcutaneously in the posterior canal wall at the junction of its bony and cartilaginous portions.

A relatively short incision is made in the skin of the posterior bony canal wall approximately 7 millimeters external to the periphery of the tympanic membrane and extending parallel to the edge of the drum from 11 o'clock to 8 o'clock in the right ear and from 1 o'clock to 4 o'clock in the left ear (Fig. 1). Elevation of the canal wall skin is begun in the posterior-superior aspect at the highest point of the incision, because here the skin is thickest and dissection easiest. The flap is then carried anteriorly toward the tympanic membrane. When the drum edge is reached a small curved elevator is inserted to lift the annular ligament with attached drum from its sulcus. This is carried downward to coincide with the length of the canal incision. The posterior-superior segment of drum can now be folded anteriorly and inferiorly affording visualization of the lenticular process of the incus, the incudostapedial joint and the stapedial tendon (Fig. 2). Occasionally the incudostapedial joint cannot be visualized and a small amount of bone from the tympanic ring just external to the joint must be removed with a small curette to provide the proper view.

When the stapes is fixed, pressure over the incudostapedial joint produces no movement in the joint, the stapes or the stapedial tendon. However, if the stapes is mobile the slightest pressure over the joint causes movement in all these structures. Keeping this in mind, the mobility of the

stapes is tested with a fine, curved probe noting the condition of the joint and the position of the stapedial tendon.

Mobilization of the stapes is attempted by three methods:

First, intermittent pressure is applied with a fine probe directly over the long process of the incus close to its attachment with the stapes. While this pressure is being applied the stapedial tendon is watched at all times for movement. The tendon relaxes or returns to its original status as pressure over the joint is exerted or removed.

Second, a fine curved pick is planted in the head of the stapes in an offset created by moving the lenticular process of the incus slightly to one side. With this pick, movement is exerted to and fro, at a right angle to the axis of the stapedial tendon and crura. This is the line of least resistance. When slight movement is obtained in this axis, the axis of movement is gradually rotated around until it is in an anterior-posterior direction or in the direction of the stapedial tendon and crura, where complete mobility develops.

Third, if the two previous attempts have been unsuccessful then a curved mobilizer is placed at the neck of the stapes and intermittent pressure is exerted downward in the direction of the stapedial tendon until movement is obtained or fracture of a crura occurs.

When the stapes is successfully mobilized the patient will usually hear immediately. The hearing is tested on the operating table with an air conduction audiometer to determine the level obtained in the three speech frequencies and a 1,024

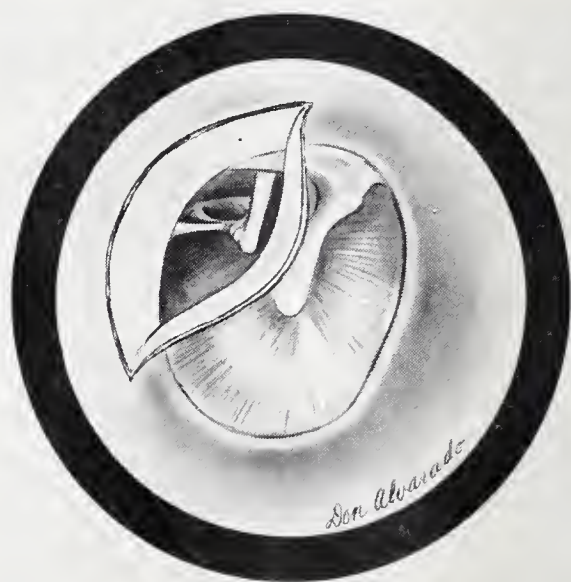


Fig. 2. Tympanomeatal flap reflected exposing incudostapedial joint and staples with tendon for mobilization operation.

tuning fork is used to determine the change in the Rinne Test.

The drum and attached skin from the external canal wall is placed back in its original position with no packing. Sterile cotton is placed in the external auditory meatus which the patient is allowed to change as necessary.

The patient is instructed to lie on the operated ear for a few hours after surgery then allowed to go home. During this time a slight earache may develop for which Aspirin grains 10 is given. A wide spectrum antibiotic is given for four days and the patient cautioned against blowing the nose. They are seen in the office in one week.

Comment

The stapes mobilization operation is not a substitute for the established fenestration operation. When a patient is an ideal candidate for fenestration, this alone, at the present time, affords the best chance of obtaining serviceable hearing. However, in cases of otosclerosis too early for fenestration, and in deafness of a mixed type, unsuitable for fenestration, the mobilization procedure has, I think, a great usefulness.

It is an established fact that the stapes operation can restore, not just serviceable, but normal hearing in some patients, however, the predictability of this success is still uncertain. At the present time there seems to be no test for determining accurately the degree of stapedial fixation, since this fixation is not always in direct proportion to the extent and duration of the hearing loss.

Mobilization of the stapes can always be attempted first on any patient showing stapedial fixation and, if unsuccessful a fenestration performed without jeopardy or penalty to the patient; but with additional confidence, since the diagnosis of otosclerosis has been confirmed in the course of the earlier procedure.

Mobilizing the fixed stapes is a simple procedure for those trained in delicate ear surgery but it is not without complications. The most frequent cause of failure to improve hearing is a fracture of the stapedial crura, occurring with an audible crack. Disarticulation of the incudostapedial joint may occur with manipulation around the head of the stapes. Otitis media may develop in an occasional patient postoperatively and perforation of the tympanic membrane can occur.

Results

My results with the stapes operation have been based on a limited number of cases (total of 36)

and therefore are not statistically significant. I was able to mobilize 18 or 50 percent of the total number of cases. At present 12 or 33 percent have maintained serviceable hearing over 3 months and some more than one year. Two unsuccessful mobilizations have been successfully fenestrated with obtainment of serviceable hearing. Also two patients having unilateral serviceable hearing after successful fenestrations underwent successful mobilizations in their opposite ear. It was interesting to note their remarks about their two ears. Both have related that their mobilized ear feels more open and normal in comparison to their fenestrated ear which feels drawn and stuffy.

Rosen⁷ reports successful mobilizations with maintained hearing longer than 2 years.

Conclusions

Time alone will tell us the true value of the stapes mobilization operation. The fact that it is simple, logical, and can restore normal, physiologic hearing with minimum discomfort to a patient gives the procedure the advantage of being more acceptable and more beneficial than the existing fenestration operation. This I think will stimulate the necessary otological research required to overcome the present uncertainties which plague the stapes mobilization operation and will ultimately remove it from the realm of speculation and place it as a sound therapeutic tool in the management of otosclerotic deafness.

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A REVIEW OF THE KIDNEY STONE PROBLEM

HARRY M. SPENCE, M.D.,* Dallas, Texas

Introduction

In my opinion the kidney stone problem remains essentially the same today as it was in years gone by, and I doubt that the dawn of the medical morrow will alter the following five basic facts:

1. The ultimate cause of kidney stones is unknown.
2. Stones cause symptoms and jeopardize the patient's welfare, not by their presence, but by obstructing the urinary passageways and abetting urinary tract infection.
3. Stones tend to recur.
4. The object of treatment is to preserve kidney function by ridding the body of the stone and correcting any known predisposing factors.
5. Thorough urologic study is indicated in every patient with a stone.

Admission of our ignorance as to causes of stone formation in no way implies lack of knowledge as to the mechanism and predisposing factors involved, however, and I now wish to consider the known contributing factors in stone formation, which are of practical importance in the prevention of recurrence.

Etiology

A true stone is not simply a conglomeration of crystals such as we find in a lump of sugar; rather a stone possesses a definite structure consisting of a nucleus about which are precipitated crystalline salts forming the bulk of the concretion, the whole being bound together by an organic matrix of mucoproteins.

The composition of the nucleus which represents the earliest portion of the stone, on which the crystals are subsequently precipitated, is variable and often indeterminate. In some cases it is obvious such as a foreign body or residual stone fragment from a previous operation. In other instances we must postulate desquamated epithelial cells, a clump of bacteria, or a blood clot. In some cases it is probable that subepithelial plaques of calcium in the region of the renal papillae serve as the nucleus of the stone after the overlying epithelium is denuded. These are called "Randall's plaques."

The crystals and substances which form the stone fall into three general classes as regards

their chemical composition: (1) The oxalate, phosphate, and carbonate salts of calcium, ammonium and magnesium; (2) Uric acid and urates; (3) The amino acid, cystine.

Once the crystallization process starts on the nucleus, the process is a self-perpetuating one, subject to acceleration or inhibition, depending on two factors—(1) The concentration of, and (2) the solubility of the crystalloids involved. Factors of clinical importance which influence the mechanism may be listed as follows:

1. **Infection**—While many urinary tract infections are uncomplicated by the presence of stone, it is a matter of everyday experience that certain types of infection, particularly those producing an alkaline urine, tend to be complicated by phosphatic stones. Infection may also disturb the balance between the crystalloids and the protective colloids which ordinarily permit substances to be in the urine in supersaturated solution. As a corollary, one of the most important measures in preventing recurrence of the stone in any infected case is to render the urine sterile.

2. **Obstruction and Stasis**—Under normal circumstances the urine is transported rapidly down the excretory passageway after it has been formed in the kidney. When stagnation occurs, the crystalloids which are normally held in solution precipitate out, and may result in stone formation. This stasis may be due to intrinsic pathology of the urinary tract, such as strictures at the ureteropelvic junction, or to any of the many conditions which render the patient recumbent for long periods of time, such as hip fractures, infantile paralysis, burns, and particularly spinal chord injuries with paraplegia. For this reason, the term "stones of recumbency" has been applied to concretions formed in these conditions. Oftentimes infection is combined with the obstruction and stasis, and when such occurs, rapid reformation or recurrence of calculi may be anticipated. The prime prophylactic measures here are to establish drainage and restore ambulation as soon as possible.

3. **Abnormally High Concentration or Urinary Salts**—Under certain conditions the concentration of crystalloids in the urine is such that the normal protective mechanism is inadequate. This may occur in the metabolic disorders of hyperparathyroidism, cystinuria, and the uric acid diathesis. Occasionally excessive dietary ingestion

*Southwestern Medical School of University of Texas, Dallas.

of the stone-forming constituents may be a contributing factor.

Obviously the volume of fluid intake directly affects the concentration of the urinary salts and one of the most practical measures in the prophylaxis of stone formation consists in an abundant intake of water.

4. **pH of the Urine**—Since we know from elementary chemistry that calcium phosphate precipitates in an alkaline solution, and since in the case of cystine and uric acid crystals the reverse is true, it is apparent that the pH of the urine has a considerable influence on stone formation, and should be adjusted according to the type of stone present. This is particularly important in the phosphatic stones, and uric acid and cystine stones. In the former the urine should be kept acid, and in the latter, alkaline. As far as calcium oxalate stones are concerned, the solubility of these crystals is not appreciably altered by the limits of acidity and alkalinity that may be encountered within the body.

5. **Deficiency of Protective Colloids**—It has been known for many years that certain colloidal substances in normal urine exert a protective action in keeping the crystalloids in solution. The word of Butt indicates that the enzyme hyaluronidase may be involved in this somewhat obscure mechanism. The work is promising and still progressing but its practical value remains to be determined.

6. **Vitamin A Deficiency** — Experimentally in rates, and clinically in countries where chronic under-nutrition is the rule, there is evidence that deficiency of Vitamin A may be a factor in stone formation in that lack of the normal cement substances binding Epithelial cells together permits keratinization and desquamation of the renal epithelium, which debris, in turn, serves as a nucleus for stone formation. On the normal American diet I doubt that Vitamin A deficiency is a significant factor in stone formation.

7. **Abnormal Muco-Protein Pathological Changes Resulting From Stones**—The most significant changes result from the mechanical construction of the urinary passageways by the stone, with dilation and ultimately destruction of the parenchyma above the point of blockage from back pressure. The obstruction predisposes to infection which in turn augments the destructive changes. It is noteworthy that these changes are not directly related to the size of the stone. Occasionally one sees a small stone blocking the ureteropelvic junction with complete destruction of

the kidney. Yet on the other hand a large stag-horn stone may cause no obstruction, and in the absence of infection, remarkably good renal function may be found. The only safe rule, however, is to regard every stone in the kidney as a potentially destructive agent.

Symptoms

Typical picture of a patient with acute renal colic is familiar to all. The mechanism of the colic is an acute block of the urinary outflow with violent peristaltic effort to overcome this obstruction. Likewise dull, nagging pain in the loin unassociated with position or activity, suggests stone. Less well known but of not infrequent occurrence are digestive symptoms with no direct evidence of their renal origin.

Hematuria, microscopic or macroscopic, usually associated with renal pain, occasionally painless, is a cardinal symptom of stone. The old urological aphorism that "blood in the urine means stone, tumor, or tuberculosis until proved otherwise" is a wise admonition. Similarly, persistent pus in the urine should make one think of stone amongst many other causes, and its finding demands thorough investigation. Apart from such chronic pyuria, a stone may first manifest itself by an attack of acute renal infection with chills, fever, and pain in the loin. The term "silent stone" has been used to designate the condition in which the patient without urinary signs or symptoms is coincidentally found to have a stone during some other radiographic examination such as cholecystography or gastrointestinal study. The term carries the erroneous connotation of benignity because, in the course of time, practically all stones not only produce symptoms but also cause kidney damage. To be sure, all stones do not demand immediate surgical intervention but the importance of their presence must be recognized.

Diagnosis

The history and physical examination, particularly in a typical case, may permit one to make a tentative diagnosis of stone. Invariably, however, this must be corroborated and amplified by appropriate roentgenographic study and the earlier this is carried out the better. The finding of pus or blood in the urine likewise, while suggestive, demands further investigation rather than treatment of these findings per se.

X-ray study of the urinary tract begins with a plain film of the area of the kidneys, ureters, and bladder. About 90% of urinary tract calculi are opaque to the X-ray. Irrespective of whether or

not the suspected stone can be seen on this preliminary film, it should simply be regarded as the first step in the radio graphic investigation, and should be followed by an intravenous urogram. This simple procedure furnishes a wealth of information. In a goodly proportion it will give all the information needed as to the exact site of the stone, the condition of the involved kidney, and the presence and state of the opposite kidney, which knowledge is imperative. A nonopaque stone may be revealed as a filling defect. In case the intravenous pyelogram is inadequate or inconclusive, cystoscopy, ureteral catheterization and retrograde pyelography, and tried and true sheet anchor of urology, are next in order.

Renal calculi can produce symptoms simulating the disorders of practically all the intra-abdominal organs. Suffice it to say that a complete urological study, carried out whenever abdominal symptoms are not adequately explained otherwise, will lead to a correct diagnosis in a considerable number of cases. It is here that an intravenous pyelogram is quite useful in ruling the urinary tract in or out as a source of the symptoms.

Treatment

Medical, instrumental and surgical procedures all have a place in the treatment of stones. Indications for each depend upon the circumstances present in the individual case and are determinedly (1) the size of the stone, (2) the position of the stone or stones, (3) the state of the kidney, and (4) the state of the patient.

For the treatment of acute renal colic morphine or allied narcotics have no peer in relieving the agonizing pain. The dose is the amount necessary to relieve the pain. Nausea so frequently accompanies renal colic that there is no point in giving medication by mouth during an acute attack. Where the patient is in agonizing pain, the administration of 100 mg. of Demerol intravenously is useful.

Medical measures in the kidney stone problem have as their objective the establishment of an environment unfavorable for the further growth of the stone, if one be present, or for recurrence after the stone has been removed or passed. This objective entails in general terms regulation of the diet, regulation of the acidity of the urine, regulation of the fluid intake, and administration of antimicrobial agents to clear up urinary tract infection.

Cystoscopic measures are indicated chiefly in the management of ureteral stone and only rarely

have anything to offer in the management of a stone in the kidney itself. In an occasional case an acute blockage of the ureteropelvic junction is best overcome by passing a catheter to the kidney and leaving it indwelling for a few days. Other things being equal, such are best removed surgically at once.

Approximately one-third to one-half of the patients with kidney stones will require surgical removal of the stone or even nephrectomy. Where a stone is obviously too large to pass or where it is obstructing the kidney outlet, open operation is indicated. Stones preferably are removed through the kidney pelvis without cutting into the parenchyma proper although if a small stone be lodged in a minor calyx, less damage is done by making an incision directly over the stone and extruding it through the kidney cortex. Staghorn stones are an exceedingly difficult operative problem. Unless one is able to remove completely the entire stone and leave behind no fragments, recurrence is the rule and little is gained by operation. An important part of the operative procedure at which any stone is removed is the correction of associate pathology such as ureteropelvic obstruction, poorly draining calyces, and ureteral kinking below the kidney.

Where preoperative studies have demonstrated that the kidney is permanently damaged to such an extent that it is serving no useful purpose, and where the other kidney is reasonably normal, nephrectomy oftentimes is indicated to restore the patient to health.

Dissolving Stones

"Doctor, can't you give me something to dissolve it?" is the almost inevitable question when a patient is informed of the presence of a stone in the kidney. Unfortunately the answer remains today as it has throughout the ages, "No!" At times oral acidification therapy may cause the calcareous debris deposited within the kidney of recumbent patients, to disappear. Prolonged alkalization has in rare cases caused cystine stones to become reduced in size or disappear. Mechanical irrigation with acidifying solutions through nephrostomy tubes or catheters may be helpful in isolated instances where stone fragments are left behind at operation. In short, however, dissolving stones is a goal of the nonfore-seeable future.

The anti-stoneforming measures to be described next are essentially prophylactic against recurrence of stones rather than useful measures against stones already present.

Prophylaxis and Prevention of Recurrence

As the stone problem has become better understood, it has become more and more apparent that the family doctor and internist as well as the urologist have an important part to play in the prevention of recurrence. It is to be emphasized that the removal of a stone merely represents one phase in the management of such a patient. From the practical point of view, the emphasis to be placed on prophylactic measures depends on the tendency to recurrence. If the patient has had only one attack of kidney colic with the passage of a small oxalate stone and no demonstrable abnormality of the urinary tract on intravenous urogram, little need be done beyond urging him to drink a copious amount of water. Even here, if the stone has been recovered, it is most desirable that it be analyzed for future reference.

If, as is often the case, the patient has reformed stones two or more times a thorough work-up is necessary in order to lay out an intelligent regime. With this information at hand, the physician can then go over the problem with the patient, explaining the whys and wherefors so far as we know them, and really make the patient feel a member of the team, indeed a most important member, just as he does in other medical conditions such as diabetes, peptic ulcer, arthritis, and like conditions. Not the least of the physician's duty is to acquaint the patient with the fact that there is no easy and complete answer to the stone problem, so that he will not fall prey to the fads and fallacies that are always with us. I shall now consider some of the specific prophylactic measures.

1. **Relief of Obstruction and Stasis**—Complete removal of the stone or stones, and correction of any impediment to the outflow of urine must be accomplished at the time of operation. Frequent turning of the bedfast patient followed by early ambulation as soon as possible is desirable to prevent stones of recumbency.

2. **Urinary Antiseptics**—With the present day antimicrobial agents intelligently applied we can count on sterilizing the urinary tract in a large percentage of cases **after** the stone has been removed and stasis corrected.

3. **Appropriate Diet**—It is not only futile but probably unnecessary to prescribe too elaborately rigid a diet in the stone-former. Before one can prescribe intelligently any diet, it is necessary to know the composition of the stone. A low calcium diet where the composition is calcium phosphate, or where a calcium oxalate stone on a nucleus of calcium phosphate is in order. The omis-

sion of milk and milk products from the diet is a simple way to achieve a reasonably low calcium diet. An acid ash diet should be given in calcium stones and an alkaline ash diet in uric acid and cystine stones.

4. **pH of the Urine**—Uric acid and cystine crystals will not precipitate in an alkaline urine, so in addition to an alkaline ash diet one teaspoonful of sodium citrate four times a day is an additional safeguard here. Contrariwise, a calcium phosphate stone-former should have the urine kept acid. This may require supplementation with acidifying agents of which sodium acid phosphate, 10 grains four times a day, is preferable to ammonium chloride. If a stone is known to be of pure calcium oxalate, there is little point in adjusting the pH of the urine. Here one relies primarily on a large intake of water.

5. **Fluids**—Many years ago Dr. Hugh Young stated that the one effective measure that a patient with recurrent stones could follow all his life was the drinking of a gallon of water a day. This statement still holds. What we do here is to keep down the urinary crystalloid concentration by keeping the urine dilute. Many patients inquire about alcoholic beverages. So far as I know they have no influence on stone formation one way or the other. Except for psychological reasons I do not believe that any benefit is to be derived from drinking distilled water.

6. **Amphojel and Basojel**—Aluminum hydroxide jels bind phosphorus in the intestinal tract, and thus deprive the stone-forming kidney of one of the building blocks of calcium phosphate. Clinical evidence that this is effective has been reported by Marshall. Yet the protracted use of the jels is unpleasant and expensive, and probably should be reversed for the patient with poor renal function where other measures have been proved ineffective. Rigidly adhered to where needed, I have found it worthwhile in a limited number of patients.

7. **Hyaluronidase**—Butt has shown this agent to be effective in restoring the balance of protective colloids in the urine. At present, however, it is still experimental and many practical problems relating to dosage, interval of administration, sensitization, etc., remain unanswered. Initial enthusiasm has given way to skepticism by most urologists, yet future developments in prophylaxis of stone may be along the lines indicated by Butt in his work with this agent.

8. **Aspirin Therapy**—Prien has recently reported on his results using 10 grains of aspirin or

Salicylamide (U.S.P.) in a small series of stone-forming patients. The results are promising and further investigation and observation is being carried out. The rationale of this is that the salicylates in the urine are conjugated with glucuronic acid, and this substance in turn increases the solubility and hence reduces the precipitability of the calcium present. The regime is undergoing rather widespread trial by urologists currently, and a definite assessment of its value should be possible within a few years.

9. **Vitamin A**—On theoretic grounds Vitamin A is worth administering and certainly does no harm. As a matter of practical importance in the

stone problem, it is my feeling that it occupies a minor role.

10. **General Measures**—Last, but not least, general measures to build up the patient's resistance against infection, clearing up of foci of infection, and avoidance of stress and strain should not be minimized and systematic follow-up.

Summary

The principles of stone-formation, so far as we know, have been reviewed and the practical management of such patients outlined. The great importance of knowing the composition of the stone so that prophylactic measures against recurrence may be initiated has been emphasized.



THE FUNCTION OF AN OUTPATIENT DEPARTMENT IN THE MANAGEMENT OF TUBERCULOSIS*

JOHN T. RIGGIN, JR., M.D.

A. Introductory Comments

In the space of the last few years it has become apparent to many of the students of tuberculosis that the classic approach to the management of this disease should be critically re-evaluated in the light of experiences gained with the newer methods of medical and surgical therapy. To a considerable extent born of necessity, and particularly affecting the larger metropolitan areas, there has been increasing utilization of outpatient type facilities in the total program of tuberculosis control. Although in Britain the concept of "Clinic Management"¹ was in use for the administration of collapse forms of therapy prior to the ready availability of drugs, in this country the main impetus for the growth of the Chest Clinic has been the development of effective antibiotic and chemotherapeutic agents. In these drugs a potent weapon had been placed in the hands of the clinician, yet their full potential could not be utilized so long as there was rigid adherence to the principle that a patient's treatment could not begin until a sanatorium bed had become available. The long periods of delay occasioned by the "waiting list" served only to make far-advanced cases of minimal ones and further propagate the disease in the home and commun-

ity. It is well known, of course, that in many areas the waiting list not only no longer exists but that there are empty beds and deactivated facilities. This improved bed situation is largely applicable to private sanatoria and to public facilities for white patients. The lack of sufficient facilities to manage adequately tuberculosis in the Negro population continues to be a problem. Since a somewhat analogous situation prevails in Arkansas today it would seem appropriate for us to examine what has been accomplished by others in the use of out-patient care and what we might achieve here.

B. Review of the Literature

In March, 1952, the New York City Health Department, faced with large numbers of active cases in the community, launched a pilot study on treatment of the non-hospitalized patient, the results of which appeared to warrant expansion of the project.^{2,3} In subsequent reports^{4,5} the results of six months treatment with isoniazid and PAS were analyzed in 348 cases of active pulmonary tuberculosis, including both patients awaiting hospital admission and many who had recently left sanatoria against advice. Varying degrees of roentgenographic improvement had occurred in 39%, deterioration in 6%. In 189 sputum-positive patients for whom sufficient follow-up data were available, there was a "conver-

*From the Department of Medicine, University of Arkansas Medical Center, Little Rock, Arkansas. Presented before the Medical Session at the annual meeting of the Arkansas Tuberculosis Association, Little Rock, Arkansas, May 4, 1956.

sion" rate of 52% from positive to negative. Others showed a marked reduction in the numbers of bacilli present. In only one instance did a previous sputum-negative patient become positive. In 82 patients so studied only 7 were discharging isoniazid-resistant bacilli at the end of 6 months. In view of the facts that more than half of the patients were over 45 years of age, that at least a third had had their disease for not less than 5 years, that a sizable proportion had been in sanatoria one or more times commonly having left against advice, and that all patients were completely ambulant and engaged in their usual activities, the results of this study were viewed as an impressive demonstration of what can be accomplished, both in the clinical and public health aspects, by well organized out-patient treatment. It is recognized, of course, that a six-month follow-up doesn't even begin to yield answers in terms of the long-range effectiveness of ambulant care. The only extension of these observations is that of Levine¹⁰ in which she notes that at the end of 12 months an additional 10% of patients (total 49%) had shown roentgenographic improvement and that although some sputum "converters" relapsed, there was also a slight net gain in this aspect. There are about 3,000 patients now on this program, and a more detailed analysis is said to be forthcoming.⁶

From North Carolina there is a report by Johnson and Peck⁷ that bears particularly upon our problem here. The shortage of beds for Negro patients was such that their waiting list was one year long. In May, 1952, the situation had become so desperate that drug therapy was instituted after the diagnosis had been made or strongly suspected and while awaiting admission. Of the 178 who filed for admission between May, 1952, and April, 1953, and who were available for follow-up at the end of that time, 146 were treated with some combination of drugs, 32 were untreated. Of the 146 treated, 117 were admitted, 8 became inactive, 16 (11%) died. Of the 32 untreated cases 12 were admitted but 20 (63%) died at home while waiting. We do not suggest that statistical correlations should be drawn from these figures, but cite them only as a general indicator of the benefit which can be derived from instituting treatment while awaiting hospitalization.

From Buffalo and Erie County, New York, there are reports of clinic operations concerned primarily with the post-hospitalization patient.^{8, 9, 10} After laying down careful criteria for acceptance, 93 new admissions to the Drug Therapy Clinic

were received and followed for 13 months. During this period not a single patient developed evidence of reactivation of tuberculosis. Good results are also reported from the Meyer Hospital Clinic in 145 post-hospital patients now under treatment plus another 121 in whom therapy has been discontinued.

Lichtenstein¹¹ in Chicago reported on 574 patients discharged from a sanatorium for out-patient follow-up chemotherapy. In general the medical results were encouraging, and it was estimated that the program had enabled the institution to cut its waiting list by 66%, reduce the hospital stay for the patients concerned by 33%, and cut the irregular discharge rate by 50%.

C. Clinic Functioning

There is presently under consideration a proposal for the organization of a Chest Clinic at the University of Arkansas Medical Center.¹² The details of the proposed plan have been drawn up and submitted to the appropriate agencies for their consideration, and here it is desired only to outline what it is hoped such a clinic might contribute to tuberculosis control in Arkansas. We wish to point out that we consider only medical indigents as eligible for the clinic except in those instances in which a private physician specifically refers a patient for another purpose. We refer hereinafter then only to indigent patients.

1. Diagnosis.

The facilities of the clinic would be available to the case-finding type agency and for referrals from practitioners for purposes of diagnosis and determination of activity in tuberculous suspects. It is expected that the implementation of this function will be enhanced considerably by having available to the clinic a small number of beds in which suitable patients can be hospitalized for brief periods.

2. Ambulant Care.

Post-Sanatorium. In view of the experiences of others it is believed that the proposed clinic would be of invaluable assistance by providing a centrally-located out-patient facility for post-hospital care and follow-up. At Booneville¹³ there are presently about 700 patients on their roster for out-patient follow-up. That this constitutes a sizable additional load on a staff which is already caring for over 1,000 in-patients is readily apparent. Because of geographic considerations a considerable proportion of the follow-up done there is necessarily without a personal visit by the patient. The maintenance of contact on a long-term basis, seeking to re-estab-

lish it when lost, is of fundamental importance in the total program of sanatorium care. Yet to pursue the problem fully would require virtually another staff section. These considerations have brought us to believe that a clinic in Little Rock could be integrated very neatly and advantageously with the discharge program at Booneville and so extend the effectiveness of sanatorium care.

At McRae¹⁴ the need for a supporting out-patient service is even more pressing. At the present time a waiting list of approximately six to eight months continues to interfere materially with the prompt institution of treatment which all would deem desirable. The sanatorium already is making truly superb use of its facilities under existing operating circumstances and cannot of its own resources do away with the delay period without jeopardizing the effectiveness of individual patient care. Yet we all are only too well aware of what this delay means in terms of the patient, the patient's family, and the community. It is especially with respect to the problem of the Negro tuberculous patient that we look for the proposed clinic to yield sizable gains.

It would appear that there are two lines of approach along which a Chest Clinic in Little Rock might bolster the capacity of McRae to cope with the situation it faces. As suggested by the experiences cited previously it seems possible with present methods of therapy to shorten considerably the average hospitalization when there is available a properly functioning out-patient service into which patients can be channeled at the appropriate point in their course. According to the Chicago figures¹¹ this would have the effect of increasing the bed capacity by about one-third, yet within the limits of the observations reported so far, still allow acceptably effective long-range care. The impact which such an increase in "functional" bed capacity might have upon tuberculosis in the Negro population is readily apparent.

Pre-Sanatorium. It is hoped that the effect of the above would be to reduce and ultimately do away with the waiting list. Meanwhile, a good out-patient service with the means for careful diagnosis would also permit administration of antimicrobial therapy during this otherwise costly period of delay, so long as it does exist. The favorable influence that this program could exert upon the increased effectiveness yet shortened duration of subsequent hospitalization, plus the reduced hazard of infectiousness, is not difficult to discern.

However, a note of caution with respect to pre-hospital treatment is appropriate. Although a number of benefits would be expected to accrue from such treatment, experiences are recorded^{6,11} which indicate that pre-hospital therapy is not without its disadvantages. Amongst these are the "lost" patients, those who because of their improved sense of well-being refuse hospitalization, and the interruptions of therapy which occur. Development of drug-resistant strains interestingly was not a great problem in the one series reporting on resistance studies.⁷ There is no unanimity of published opinion as to how serious are these objections to pre-hospitalization treatment. It is probably safe to assume that at the present most observers continue to hold to the premise that a period of hospitalization as early as possible is the optimal program. Nevertheless, it is our belief that in a situation as demanding as ours one is compelled to institute out-patient chemotherapy in those patients for whom treatment would otherwise be delayed significantly. With sufficient integration of effort on the part of all agencies concerned it would be hoped that the departures from optimal treatment could be kept to a minimum.

3. Teaching.

The very concept of out-patient care of tuberculosis, never possible prior to the developments of the past few years, carries with it the implication of an expanding role to be played by the general physician. In particular, McKay cites the important function of the private practitioner in the operation of their program.⁸ In anticipation of the responsibilities which will be thrust upon them, teaching centers such as ours have an essential obligation to prepare their students and resident staffs for their future participation in tuberculosis control. To dwell upon this phase of operation of the proposed clinic is not apropos of this discussion. Suffice it to say that such an out-patient facility, functioning in coordination with two sanatoria, would provide an excellent mechanism for imparting to the student first-hand knowledge of the entire gamut of tuberculosis management.

D. The Problem of Follow-Up

Of all the provisions which must be made for the successful operation of such a clinic, none is held to be more important than that of insuring the adequate follow-up of its patients. The best of professional care is of little avail in the sense of the long-range effect upon public health unless those affected with the disease are known to have been rendered and to remain non-infectious.

The very identification of an active case of tuberculosis and its subsequent management in the home, either before or after hospitalization, raises a staggering array of problems concerning both the patient and the family: Who and where are the contacts? Are they infected? What are the conditions in the home? What degree of isolation can be achieved? Can the patient really rest? Is adequate diet possible? Are drugs obtainable? Are they being taken properly and regularly? Questions such as these represent only a partial list of the considerations which must be accorded each new case as it is found, each patient placed in the home for treatment. To a large extent the success of any out-patient program for tuberculosis care will be measured in terms of how well we know **and heed** the answers to the questions posed.

It is apparent that in order to fulfill this most important requirement for effective operation, there must be set up within the framework of the clinic a system for patient follow-up as near infallible as conditions permit. The center point of this system we consider to be the social service case worker in the clinic proper. From this person lines of communication radiate outward via those agencies which have representatives in the field capable of establishing and maintaining direct patient contact. Along these lines there is a two-way flow of information so that the status of each patient is kept current and none are permitted to fall by the wayside unheeded. Close coordination must also be effected with the sanatoria relating to admissions and discharges, so that as a patient leaves one area he is automatically picked up in the other. In a Chest Clinic this phase of operations is so critical that we would consider ourselves on very shaky ground indeed to embark upon a program of out-patient tuberculosis care without first having prepared the mechanism for follow-up. It is for this reason that we are so hopeful that the services of a social worker can shortly be acquired.

E. Summary

The newer methods of antituberculosis therapy have permitted the development of the concept

of out-patient tuberculosis care, and the reported experiences in this field have been reviewed. In the light of these experiences the establishment of a Chest Clinic at the University of Arkansas Medical Center would appear to be desirable. The manner in which such a clinic would be expected to operate and the contributions it could make are described. It is felt that the importance of an adequate system for patient follow-up cannot be overemphasized.

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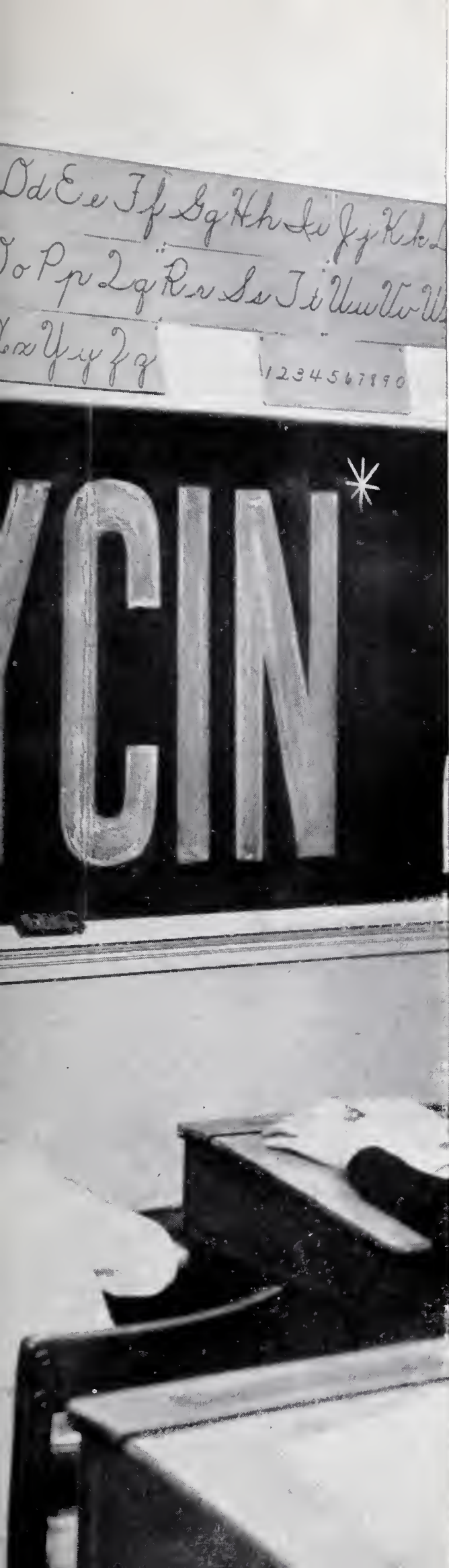
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MAPS

THE WORLD

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¹January, H. L. et al: Clinical experience with tetracycline. *Antibiotics Annual* 1954-55, p. 625.



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★ Editorial ★

THE THYROID PROBLEM

ALFRED KAHN, JR., M.D.

Although the thyroid gland has been the subject of much brilliant research, there is still disagreement concerning methods of treatment of hyperthyroidism and uncertainty in interpretation of experiments concerning thyroid hormone metabolism.

In a recent guest editorial in the Journal of the American Medical Association (Vol. 161, page 628, June 16, 1956) Dr. Werner pointed out a possible danger of using radioactive iodine. He said that whereas the literature does not so far show strong evidences of malignancy following the use of radioactive iodine, future follow-up on these cases may show that this type of treatment may induce malignancy; in other words, the follow-up period is too short. Werner did not feel that there was not a place for radioactive iodine in therapy. Chapman and Maloof (Medicine, Vol. 34, Sept., page 261), have followed a series of cases of hyperthyroidism for 12 years without finding a case of malignancy they could attribute to radioactive iodine. In general, at this time, there are no reports in the literature indicating radioactive iodine as employed to treat hyperthyroidism is a potent carcinogen, but some research workers feel the follow up period is too short for certainty. Surgery combined with the thiourea drugs as a treatment for hyperthyroidism now has a mortality rate of a fraction of 1%. This is in contrast to surgery before the use of the thiourea drugs which ran several times this mortality figure; surgery produces a definite morbidity with hospitalization in addition to the remote possibility of a fatality. It should be pointed out that thiourea drugs are not entirely innocuous, either; occasionally allergic reactions with skin and bone marrow involvement occur.

Undergoing intensive investigation is the physiology of the thyroid gland. Berson has reviewed much of this material in a thyroid symposium in the American Journal of Medicine (page 653, Vol. 20, May, 1956). He discusses the body's iodide pool which is about co-extensive with the extracellular space; iodide may be removed from this by excretion or trapping by the thyroid gland. If the iodide is trapped, before use it must be oxidized to I_2 . The exact site of incorporation of I_2 into the organic portion of the thyroid hormone is undetermined but thought to be in the cell. It

is postulated the cycle of formation of the hormone in the thyroid is accomplished by progressive iodination: mono-iodotyrosine \rightarrow di-iodotyrosine \rightarrow Thyroxine; a further compound triiodo thyronine may be formed in the tissues or in the thyroid gland. Apparently, in the gland the hormone is stored as a thyroglobulin; outside the thyroid, thyroxine is the common form. After leaving the thyroid pool, thyroxine is carried by the plasma proteins; thyroxine passes from the capillaries into the tissues where it participates in the tissue metabolism. The reader is referred to this excellent symposium for details of this interesting subject.

The attention of all members is directed to the proposed Code of Ethics from the American Medical Association. This new Code was published in the August, 1956, issue of the Journal of the Arkansas Medical Society. The Code will be discussed and voted on in a coming meeting of the American Medical Association. Any members who would like to have the Code changed in any way should contact one of the following:

W. R. Brooksher, M.D.	Fount Richardson, M.D.
Fort Smith, Arkansas	Fayetteville, Arkansas
R. B. Robins, M.D.	J. M. Kolb, M.D.
Camden, Arkansas	Clarksville, Arkansas

MEDICINE IN THE NEWS

Washington, D. C.—If medical research doesn't move ahead in the current fiscal year (ending June 30, 1957), it won't be the fault of Congress. The seven research organizations that make up the National Institutes of Health have far more money than they have ever had, and probably much more than their directors even dared hope for last winter at the start of hearings on their budgets. Every one of the research institutes received a substantial increase over last year, and the funds of five of them were almost doubled.

The Institutes have a total of \$170.4 million to spend before next July 1. This is about 80% more than they had last year. In discussing the appropriations bill on the Senate floor, Senator Lister Hill (D., Ala.) said the bulk of the money will go for grants to non-federal institutions—hospitals, medical schools, clinics and state and local organizations engaged in research.

The U. S. Internal Revenue Service has just issued a regulation which is important to physicians.

Efforts over a long period of time by the A.M.A. Law Department to get the Internal Revenue

Service to issue a regulation permitting physicians to deduct their expenditures in taking post-graduate "refresher" courses have finally paid off.

The regulation, effective on August 9, provides that expenditures for education are deductible if they are for a "refresher" or similar type of course taken to maintain the skills directly and immediately required by the physician in his employment or business. An educational course to be covered should be designed for established medical practitioners to help them keep abreast of current developments in the profession; it should be of short duration; it should not be taken on a continuing basis, and should not carry academic credit. Education designed to prepare the practitioner to enter a specialty will not be acceptable.

When a physician travels away from home primarily to obtain "refresher" education, his expenditures for travel, meals, and lodging while away from home are deductible. However, expenses for personal activities such as sightseeing, social visiting or entertaining or other recreation will NOT be allowed.

The Michigan State Medical Society recently surveyed each of the 49 constituent state medical associations (District of Columbia and the 48 states) on current state dues.

The study showed that the average American physician pays between \$50 and \$60 per year state association dues. His county society dues range from \$20 to \$70 per year depending upon whether the county or component society maintains an executive office.

The Commission on Nutrition of the State Medical Society of Pennsylvania is now making available a new revised edition of its **MANUAL OF STANDARD THERAPEUTIC DIETS**.

Over 30 separate diets are presented. These cover a wide variety of nutrition needs from liquid diets through soft diets to various types of modified diets. Recommended daily dietary allowances are given as well as a food composition table for a short method of dietary analysis.

Using \$10 million Congress has appropriated for the purpose, Veterans Administration will expand its research in major diseases. The fund is \$4.3 million more than the agency had last year for medical research. V.A. says most effort will be concentrated in four areas of major disease, neuropsychiatric, cardiovascular, cancer and leukemia, and geriatrics. Work also will be expanded in tuberculosis and the infectious diseases.

In preparation for a national blood bank directory, the Joint Blood Council begins a nation-wide survey on September 1 of all blood banks. The council, through its executive vice president, Dr. F. E. Wilson, said the directory will include the following: location and areas served by individual blood banks and hospitals, how each is operated, whether commercial or non-profit, adaptability for expansion in a national emergency, volume of utilization, and relationship of each blood bank to allied services such as tissue banks.

RESULTS OF PHYSICAL EXAMINATIONS OF DOCTORS

During the annual A.M.A. meeting in Chicago there was an exhibit booth, equipped with X-ray and electrocardiograph, where physicians could be examined. The booth, entitled "A Yearly Physical Examination for Every M.D.," was a joint enterprise of the A.M.A. Section on General Practice, the American Academy of General Practice, and the National Tuberculosis Association.

Within a few moments the ECG tracing and the X-ray diagnosis were made available to the physician. Dr. I. E. Buff, Charleston, W. Va., cardiologist, who was on duty at the booth and read many of the tracings, is convinced after his experience that many doctors are too neglectful of their health.

A study of the results revealed one surprising fact: 58 doctors or 6 per cent of the total who underwent X-ray examination had suspected tuberculosis. Following is a breakdown of the complete results:

965 Chest X-rays

Negative findings	861	83.5 per cent
Suspected tuberculosis	58	6.0 per cent
Cardiac findings	42	4.3 per cent
Other pathology	59	6.1 per cent

1,083 Electrocardiograms

Negative findings	821	84.9 per cent
Abnormal ECG	97	10.0 per cent
Borderline ECG	49	5.1 per cent
Survey sheets not returned.....	116	.

Construction of additional rooms and facilities to the present Hot Spring County Memorial Hospital, Malvern, was started in July.

At the Arkansas State Medical Meeting in April, Mr. Robert J. Norwood, president of the DeGay Laboratories, established a grant of \$1,000 to be awarded to an Arkansas boy taking a two-year general practice residency in Arkansas. The recipient for the year beginning July, 1956, is Dr. James J. Greenhaw, Snowball, Arkansas.

The University of Arkansas Medical Center opened a chest clinic July 12 for diagnosis and treatment of tuberculosis. Patients will be referred to the clinic by the Arkansas Tuberculosis Association, the Pulaski County Tuberculosis Association and private physicians. The clinic will be limited to those who cannot pay for treatment. Another phase of the chest clinic's work will be the follow-up of patients who have been discharged from the Arkansas Tuberculosis Sanatorium, Booneville, and the McRae Sanatorium, Alexander. R. John T. Riffin, Jr., associate professor of medicine at the University, will be in charge.

J. B. Norman, head of a firm employed by North Little Rock to determine its hospital needs, says the city should build a 90-bed hospital. The report said the city is in a "very serious" situation because of its size and poor access to the nearest hospitals. " * * * It presents a serious transportation problem under normal circumstances and in the event of disaster, such as a serious fire on either side of the approaches to the bridges where traffic would be tied up. * * *"

The Southern Medical Association will celebrate its Golden Anniversary with a special program at the Read House, Chattanooga, Tennessee, Tuesday evening and Wednesday forenoon, October 2-3. This will be a historical and inspirational meeting and will not conflict with the regular annual scientific session at Washington, November 12-15.

Chicago, August 1—United States hospitals cared for 21,072,521 patients in 1955, more than in any previous year, the American Hospital Association announced today. This was an increase of 727,090 over 1954's total of 20,345,431.

The non-profit general hospitals which care for the great majority of the acute, short-term cases in the nation spent an average of \$24.15 a day for the care of each patient. This represented an increase of \$1.37 over 1954. In these hospitals the average expenditure on each patient in 1955 was \$181 compared with \$171 in 1954.

ANNOUNCEMENTS AND THINGS TO COME

The Pulaski County Medical Society is to have a past president's banquet Thursday evening, October 18, at the Marion Hotel, Little Rock. The officers of the State Medical Society and the

American Medical Association have been invited to attend. All members of the Arkansas Medical Society are invited to attend.

The Little Rock Academy of Surgery will meet on the last Wednesday of every month. Interesting programs have been planned.

The Southern Medical Association is pleased to announce the establishment of its Distinguished Service Award. The Award is symbolized by an attractive 14K gold medal, the first one of which will be awarded at the Association's Golden Anniversary Meeting in Washington, D. C., November 12-15, 1956.

The first Arkansas Conference for the Handicapped has been scheduled for October 9-10 in Little Rock at the Marion Hotel. While the Conference will deal primarily with handicapped children, it will also include the problems of the handicapped adult. Plans for the Conference developed following a November meeting held under the auspices of various civic organizations of Arkansas.

The 8th Annual Postgraduate Assembly of the Endocrine Society in cooperation with The University of Texas Postgraduate School of Medicine and The University of Texas, M. D. Anderson Hospital and Tumor Institute will be held October 22-27, 1956, at the Texas Medical Center, Houston 25, Texas.

A dedicatory scientific symposium will be held at the University of Mississippi School of Medicine, Jackson, Mississippi, October 23-24, 1956.

San Diego Postgraduate Assembly, San Diego County Hospital, San Diego, California, September 19 and 20. Michael J. Feeney, M.D., 3415 Sixth Avenue, San Diego 3, California.

The American Rhinologic Society will hold its annual meeting in Chicago, October 9-13, 1956.

The Rhode Island Medical Society announces that the Trustees of America's oldest medical essay competition, the Caleb Fiske Prize of the Rhode Island Medical Society, announce as the subject for this year's dissertation "THE PRESENT DAY TREATMENT OF INFERTILITY." The dissertation must be typewritten, double spaced, and should not exceed 10,000 words. A cash prize

of \$350 is offered. Essays must be submitted by January 10, 1957.

For complete information regarding the regulations write to the Secretary, Caleb Fiske Fund, Rhode Island Medical Society, 106 Francis Street, Providence 3, Rhode Island.

The American Goiter Association again offers the Van Meter Prize Award of \$300.00 and two honorable mentions for the best essays submitted concerning original work on problems related to the thyroid gland. The award will be made at the annual meeting of the Association which will be held in the Hotel Statler, New York, New York, May 28, 29 and 30, 1957, providing essays of sufficient merit are presented in competition.

The competing essays may cover either clinical or research investigations, should not exceed 3,000 words in length and must be presented in English. Duplicate typewritten copies, double spaced, should be sent to the Secretary, Dr. John C. McClintock, 149½ Washington Avenue, Albany 10, New York, not later than January 15, 1957. The committee who will review the manuscripts is composed of men well qualified to judge the merits of the competing essays.

A place will be reserved on the program of the annual meeting for the presentation of the winning essay by the author if it is possible for him to attend. The essay will be published in the annual proceedings of the Association.

Arkansas

TRAVELING

And Clipping Bits Here and There

The Physician's Attainments. No one should study medicine unless he feels dedicated to a life of service to his fellow men. It will be a life that contains many bitter disappointments and sorrows as well as a fair share of joys and gratification. As a husband and father the physician will leave much to be desired. His income will be modest, although adequate for his children's education and his wife's comfort. And because medicine is a jealous mistress, he will have far too little time for home, for family, for holidays, and for fun with his children.

LETTERS TO EDITORS

Dear Physician:

We are now in the peak of the polio season and less than a third of the eligible children in Arkansas have received the vaccine. No doubt, there will be a number of children who will have polio in all degrees from non-paralytic to death. We will never know how many we could have prevented. We do know that the polio cases will cost some one plenty for care. A good share will be the charges of the state and charitable agencies which we support.

The problems of the vaccine are past history. There is plenty of vaccine for anyone who needs it. There is actually no reason in view of the amount of vaccine available, which would prohibit adults from receiving the vaccine also, if they desire, as well as children in the state. Every effort should be made to encourage patients to take the vaccine and eliminate polio from our state. The disease is already declining and we as physicians are morally obligated to do all possible to wipe it out.

The Polio Advisory Committee urges and hopes you, as a physician in Arkansas, will make every effort to give your patients the Salk vaccine and the polio problems to rest in order that we can all get to more important and urgent problems that now confront us.

Sincerely,

Polio Advisory Committee,
Eugene H. Crawley, M.D.,
Chairman.

Obituary

DR. ROBERT H. RAY, long-time resident of Earle, suffered a fatal accident Wednesday, July 4, when his car was struck by a Missouri Pacific passenger train at Lansing crossing. He was 76. Dr. Ray was born in Nankapoo Tenn., July 25, 1880, and was graduated from the University of Tennessee School of Medicine. Dr. Ray was an ordained minister of the Baptist Church, a member of the Masonic Lodge and active in church and civic affairs. Besides his wife, he is survived by five sons, Buford and R. H. Ray, Jr., of West Memphis; Kinley Ray of Osceola; Leonard Ray of Jonesboro, and R. C. Ray of Earle; three daughters, Mrs. Leslie Clark, Memphis; Mrs. Her-

bert Howard of West Memphis, and Mrs. Olga Hutton of Memphis.

DR. ELWOOD HOFFMAN McCRAY, SR., aged 79, a retired physician and surgeon, died Saturday, July 7, at his home in Malvern. Dr. McCray was a native of Saline County where he was born in Benton on October 12, 1876, but had resided in Malvern since 1902. He was a member of the First Methodist Church, an honorary member of the American Medical Association, Arkansas Medical Association, Hot Spring County Medical Association, Rockport Masonic Lodge, Number 58 F. and A. M. Survivors include his wife, one daughter, Mrs. Robert D. Roland; two sons, E. H. McCray, Jr., and Dr. R. V. McCray; one sister, Miss Agee E. McCray; eight grandchildren and one great grandchild, all of Malvern.

PERSONALS AND NEWS ITEMS

A new clinic has been opened in DeWitt by Dr. John M. Hestir and Dr. Nolan F. Beverly.

Dr. Barton A. Rhinehart, Little Rock, flew to London Saturday, July 14, to attend the International Congress of Gastroenterology July 17-21. After spending a few days touring England and Scotland, he returned to Little Rock July 30.

A new and modern clinic has been opened in Malvern by Dr. R. V. McCray and Dr. Paul N. Means. It is the first office building of its type that has been built in that city.

The new staff doctor and director of the Community Health Clinic at Perryville is Dr. Nils C. Pehrson.

Dr. John G. Howard, Jr., formerly Associate Professor and Head of the Psychiatric Out-Patient Clinic for Adults at the University of Arkansas Medical Center, has recently opened an office in Little Rock for the practice of psychiatry.

Recently a clinic was opened at Ola by Dr. J. H. Scroggin.

Associated with Dr. David M. Williams now for the general practice of medicine and surgery in Russellville is Dr. Douglas H. Lowrey.

Dr. Kenneth A. Siler has moved from Siloam Springs to New Orleans. He will study and work in that city for the next two years.

Hampton has a new physician. He is Dr. Joe Ellis, who has moved from Wichita, Kansas, to begin practice at the Calhoun County Hospital.

Dr. Paul H. Woods has completed his residency and is returning to Little Rock for the practice of Obstetrics and Gynecology.

It has been announced by Dr. T. H. Hickey that Dr. Charles F. Wells is now associated with him in practice at his clinic in Morrilton.

Moving to Siloam Springs to begin his practice of medicine is Dr. B. J. Puckett.

The Mobley Clinic in Perryville has announced that Dr. Austin D. Gullett has joined their staff.

A new Civil Defense Council was started in Little Rock July 18, 1956. Dr. Ellery C. Gay has been appointed temporary director.

ARKANSAS MEDICAL SOCIETY COMMITTEES—1956-1957

	Term Expires April		Term Expires April
COMMITTEE ON CANCER CONTROL		C. C. Long, Ozark	1958
Jean Gladden, Harrison, Chairman	1958	James M. Kolb, Clarksville	1957
C. A. Archer, Jr., Conway	1957	Jack Kennedy, Arkadelphia	1959
Edwin F. Gray, Little Rock	1959	Sub-Committee on Postgraduate Education	
W. H. Handley, Jr., El Dorado	1959	Willis E. Brown, Little Rock, Chairman	1958
W. E. Jennings, Rogers	1957	James M. Kolb, Clarksville	1957
Fred Krock, Fort Smith	1957	Paul Sizemore, Magnolia	1959
Jack Kennedy, Arkadelphia	1958		
COMMITTEE ON PUBLIC HEALTH		COMMITTEE ON HOSPITALS	
(Also to Serve as Rural Health Committee)		Guy Shrigley, Clarksville, Chairman	1959
Ben N. Saltzman, Mountain Home, Chairman	1957	Robert Hyatt, Monticello	1958
John T. Herron, Little Rock	1958	C. C. Long, Ozark	1958
W. A. Snodgrass, Jr., Little Rock	1958	A. S. Koenig, Fort Smith	1957
A. H. Maddox, Paragould	1959	J. Max Roy, Forrest City	1957
W. H. Pruitt, Camden	1957	S. Wright Hawkins, Fort Smith	1959
Duane E. Brothers, Ozark	1959	Sub-Committee on Liaison with Blue Cross-Blue Shield	
Sub-Committee on Maternal and Child Welfare		Sam Jameson, El Dorado, Chairman	1957
Frances Rothert, Little Rock, Chairman	1958	Ellery C. Gay, Little Rock	1958
Roger Bost, Fort Smith	1957	R. C. Dickinson, Horatio	1958
E. H. Crawley, Little Rock	1959	Gerald Teasley, Texarkana	1959
Sub-Committee on Industrial Health		A. S. Koenig, Fort Smith	1957
H. E. Mobley, Morrilton, Chairman	1957	Ulys Jackson, Harrison	1959
Samuel B. Thompson, Little Rock	1958	COMMITTEE ON PUBLIC RELATIONS	
Frank Padberg, Little Rock	1958	Dale Alford, Little Rock, Chairman	1957
John D. Olson, Fort Smith	1957	R. B. Robins, Camden	1958
Charles A. Taylor, Batesville	1959	L. A. Whittaker, Fort Smith	1958
Noble Daniel, Texarkana	1959	J. B. Wharton, Jr., El Dorado	1953
A. D. Cathey, El Dorado	1959	Gilbert D. Jay, III, West Memphis	1953
Sub-Committee on Tuberculosis		C. Lewis Hyatt, Monticello	1957
Jerome S. Levy, Little Rock, Chairman	1957	John W. Dorman, Springdale	1959
Harvey Shipp, Little Rock	1958	M. C. John, Jr., Stuttgart	1959
Fred Gray, Little Rock	1958	Sub-Committee on State Health and Medical Resources for Civil Defense	
C. A. Henry, State Sanatorium	1959	Joseph Buchman, Little Rock, Chairman	1959
Harley C. Darnall, Fort Smith	1957	M. J. Kilbury, Jr., Little Rock	1957
Preston L. Hathcock, Fayetteville	1959	L. E. Drewery, Camden	1959
Sub-Committee on Mental Health		Sub-Committee on Liaison with the Nursing Profession	
Euclid Smith, Hot Springs, Chairman	1957	Hoyt Choate, Little Rock, Chairman	Permanent
Byron A. Bennett, Little Rock	1958	Robert F. Hyatt, Monticello	Permanent
William G. Reese, Little Rock	1959	Woodbridge Morris, Little Rock	Permanent
Henry M. Sims, Fort Smith	1959	Sub-Committee on Liaison with the Auxiliary	
Sub-Committee on Liaison with State Board of Health		Louis K. Hundley, Pine Bluff, Chairman	1957
John Herron, Little Rock, Chairman	1958	Hoyt Choate, Little Rock	1957
W. J. Rhinehart, Little Rock	1957	A. A. Little, Texarkana	1957
Ruth Ellis Lesh, Fayetteville	1959	John T. Gray, Jonesboro	1957
Polio Advisory Sub-Committee		L. Gardner, Russellville	1957
E. H. Crawley, Little Rock, Chairman	1957	COMMITTEE ON THE AMERICAN MEDICAL EDUCATION FOUNDATION	
Katharine Dodd, Little Rock	1958	W. R. Brooksher, Fort Smith, Chairman	1957
John Hundley, Little Rock	1953	J. H. McCurry, Cash	1959
James T. Rhyne, Pine Bluff	1959	Raymond Cook, Little Rock	1959
W. H. Pruitt, Camden	1957	COMMITTEE ON VETERANS ADMINISTRATION AFFAIRS	
COMMITTEE ON MEDICAL EDUCATION		H. Elvin Shuffield, Little Rock, Chairman	1957
H. W. Thomas, Dermott, Chairman	1957	Gordon P. Oates, Little Rock	1958
Rodger Dickinson, DeQueen	1958	Friedman Sisco, Springdale	1959
Alfred Kahn, Jr., Little Rock	1958		
Fred W. Ogden, Fayetteville	1958		

PROCEEDINGS OF SOCIETIES

Dr. Ellery Gay, associate professor of pathology with the University of Arkansas Medical School, addressed a group of physicians and dentists in Fayetteville, June 27. The dinner meeting was sponsored by the staff of the Veterans Hospital. Members of the Washington County Medical Society and area dentists attended. Dr. Gay spoke on "Facial Injuries and Their Repair."

The House of Delegates of the A.M.A. at its 105th annual meeting in June of this year at Chicago approved the report of the Committee to Review the Functions of the Joint Commission on Accreditation of Hospitals, which was appointed by the Speaker as a result of action taken at the June, 1955, meeting. The Committee came to the following conclusions:

"1. Accreditation of hospitals should be continued.

"2. The Joint Commission should maintain its present organizational representation.

"3. The Board of Trustees should report annually to the House of Delegates on the activities of the Joint Commission.

"4. Physicians should be on the administrative bodies of hospitals.

"5. General practice sections in hospitals should be encouraged.

"6. Staff meetings required by the Joint Commission are acceptable, but attendance requirements should be set up locally and not by the Commission.

"7. The Joint Commission should not concern itself with the number of hospital staffs to which a physician may belong.

"8. The Joint Commission is not and should not be punitive.

"9. The Joint Commission should publicize the method of appeal to hospitals that fail to receive accreditation.

"10. Reports on surveys should be sent to both administrator and chief of staff of hospital.

"11. Surveyors should be directly employed and supervised by the Joint Commission.

"12. Surveyors should work with both administrator and staff.

"13. New surveyors should receive better indoctrination.

"14. Blue Cross and other associations should be requested not to suspend full benefits to non-accredited hospitals until those so requesting have been inspected.

"15. The American Medical Association should conduct an educational campaign for doctors relative to the functions and operations of the Joint Commission.

"16. The Committee also suggests that the American Medical Association and the American Hospital Association encourage educational meetings for hospital boards of trustees and administrators either on state or national levels to acquaint these bodies with the functions of accreditation.

"17. This Committee asks to be discharged upon submission of this report to the House of Delegates."

The House also approved a reference committee suggestion that the following statement be added to strengthen the report:

"The Committee recommends that the commissioners of the Joint Commission on Accreditation of Hospitals, appointed by the Board of Trustees of the American Medical Association, urge that Commission to study:

"1. The problems of the exclusion from hospitals and arbitrary limitation of the hospital privileges of the general practitioner, and

"2. Methods whereby the following stated principles may be achieved:

" 'The privileges of each member of the medical staff shall be determined on the basis of professional qualifications and demonstrated ability.'

" 'Personnel of each service or department shall be qualified by training and demonstrated competence, and shall be granted privileges commensurate with their individual abilities.' "

TUBERCULOSIS ABSTRACTS

A Review for Physicians

ISSUED MONTHLY BY THE NATIONAL TUBERCULOSIS ASSOCIATION
REPRODUCED FOR ARKANSAS PHYSICIANS BY THE ARKANSAS TUBERCULOSIS ASSOCIATION
"A CHRISTMAS SEAL SERVICE"

TUBERCULOSIS IN INFANTS AND CHILDREN

A review of tuberculosis in the younger age groups calls attention to certain persistent concepts which seem to be either erroneous or ill-founded. It seems advisable here to make preliminary mention of the therapy of certain localized forms of tuberculosis for which the methods of treatment may have to be revised.

The cases studied consist of 101 patients discharged from a pediatric hospital between 1949 and 1955, of whom 56 per cent were less than three years of age when admitted. This group represents a fairly accurate cross-section of the tuberculosis problem in this area.

Admission to the hospital was based upon the demonstration of significant tuberculous disease either in the chest film or upon physical examination. Most of these patients presented clear evidence of clinical illness. Diagnoses were confirmed by biopsy, culture methods or by differential clinical study. Seventy-two patients presented unmistakable pulmonary disease. Eleven of the 34 right-sided lesions were the result of bronchial obstruction, 19 patients presented bilateral infiltrations and cavitation was demonstrable in a considerable number. Tuberculous pleuritis in eight patients with so-called "primary" disease is also noteworthy.

Almost 20 per cent of the children discharged had, in association with other tuberculosis, enlargement of superficial lymph nodes, the diagnosis of which was confirmed by biopsy. In the five children in whom tonsillectomy and adenoidectomy were performed, two were found to have tuberculosis of these tissues.

Children with tuberculous osteoarthritis are usually sent to the orthopedic services and in this series there were only seven children in this category. Two patients who have been treated with protracted courses of isoniazid-PAS are of interest. They had received little fixation, immobiliza-

tion, or prevention of weight bearing, but one, an infant with tuberculosis of the tibia and knee joint, now has a complete range of motion. The other, a six-year-old Negro boy with severe Pott's disease and a large abscess of the thigh, has little deformity and no residual abscess.

Miliary tuberculosis and tuberculous meningitis have received considerable notice recently. In this series miliary tuberculosis was limited to six children of less than two years. Of the 21 patients with tuberculous meningitis, six had no other demonstrable tuberculous disease. Our findings parallel those of others which indicate that the younger the child, the higher the incidence of meningitis and miliary tuberculosis, and the worse the outlook for recovery.

Approximately two years ago, it was decided to establish a basic drug regimen for all children. This consists of isoniazid, 4 mg. per kg., and PAS, 200 mg. per kg. per day, with both drugs administered at least one year. In children with either miliary or meningeal infections, the practice had been to increase the dose of isoniazid to 10 mg. per kg. for the first two weeks and to give streptomycin-PAS as well. This triple-drug therapy has been continued for at least 18 months after the cerebrospinal fluid is normal.

For the last four years all children with tuberculosis of the superficial lymph nodes have received radiation therapy in addition to chemotherapy except those whose nodes were completely removed and those who could not be moved to the therapy unit. It is the impression that nodes regressed in size more rapidly with radiation therapy plus drugs than with drugs alone. Radiation therapy has not been used in instances of tuberculosis of mediastinal nodes, nor as the sole means of treatment.

The treatment of osseous disease consists of isoniazid-PAS in the basic dosage given above. If abscesses are present, they are drained surgically. Thoracic surgery has been necessary in 3

cases. Two resections were performed for residual cavitation and one for persistently collapsed middle lobe with bronchial disease. The procedures were tolerated very well. No collapse measures have been used.

The most striking difference between this group of sick children and those who have no evidence of tuberculosis other than a positive reaction to tuberculin is the fact that the former usually had had massive and intimate contact. This suggests that in early life the size of the infecting dose is probably of prime importance in development of disease, while the age of the child is the most important determinant of the outcome. The duration of the disease and the condition of the child at the time of hospital admission are also important. Half of the mortality occurred within 30 days of admission. In the future the drug resistance of the tubercle bacilli may prove equally significant.

The widespread distribution of disease in both lungs in 20 per cent of this series and the occasional occurrence of tuberculosis in the tonsils would apparently point to several sites of invasion. The possibility of direct invasion through bronchial and bronchiolar walls as well as at the alveolar level has to be recognized. In this series 12 patients exhibited massive mediastinal adenopathy without apparent pulmonary infiltration.

Tuberculosis of the superficial lymph nodes is not infrequent in the early age groups. Tuberculosis of the cervical lymph nodes may be the result of drainage from tonsils. The fact that in some cases the tonsils are not diseased suggests that other routes such as through the paratracheal nodes are important. Present knowledge of lymphatic drainage would tend to incriminate the pleura as the source of infection for the axillary groups.

The repeated occurrence of pulmonary necrosis in what seems to be the sites of invasion, the development of superficial implantation type of bronchitis, and the occurrence of effusions, seem to indicate that any effort to divide tuberculosis into primary and secondary types is essentially meaningless. To one who has been familiar with tuberculosis in adults, the most striking differences consist of the location of the disease within the lung, the presence of disease of the mediastinal nodes, the tendency toward hematogenous dissemination, and the rather striking degree of recovery. One feature of generalized tuberculosis in early life is the absence of renal disease. In the present series, in spite of most careful search, no case of renal disease was discovered.

The remarkable outcome of isoniazid therapy in the two cases of osseous tuberculosis calls for a reconsideration of the methods of management. If it is possible to preserve the function of a major joint, such as the knee, and to avoid fixation without jeopardizing the patient's future welfare, it is most advisable to study this more extensively.

Radiation therapy in itself has proved to be quite effective over short-period follow-up in the treatment of superficial lymph nodes. Nevertheless, the young child, in the face of a high probability of dissemination, requires every possible prophylaxis against hematogenous seeding. This can best be accomplished by the use of isoniazid-PAS. The drainage of tuberculous pus and the removal of tuberculous necrotic material whenever it is feasible and safe, is the major desideratum. The treatment chosen consists basically of chemotherapy; to this is added excision of nodes when they are accessible and limited in number, the free drainage of pus when the nodes are fluctuant, and the application of radiation therapy when the nodes are multiple or when palpable masses persist after drainage.

WOMAN'S AUXILIARY

The 33rd Annual Convention of the Woman's Auxiliary to the American Medical Association recently held in Chicago, Illinois, at the Conrad Hilton Hotel was well attended by Arkansas Auxiliary members, with a full delegation and several alternate delegates present. Mrs. L. Gardner, Russellville, president of the Arkansas Auxiliary, responded to the address of welcome in most appropriate, original poetry. Mrs. Louis K. Hundley, Pine Bluff, served as a member of the 1955-56 Nominating Committee and on the Election Committee. Mrs. Mason G. Lawson, Little Rock, retiring National President, was elected to serve as a Director for one year and was also elected to serve on the 1956-57 Nominating Committee. The Committee subsequently elected her to serve as the Chairman of this Committee.

Membership in the A.M.A. Auxiliary now totals approximately 74,000 in all of the States, the District of Columbia, Hawaii and Alaska and for the first time, this year, Alaska sent a delegate to the Convention. The Hawaii Auxiliary presented orchid leis to all of the National Officers at the luncheon on Tuesday, June 12.

Contributions from Counties, States and the National Auxiliary, to the American Medical Education Foundation, this year, totals \$90,150.00 and through the 80 Dimes Campaign an additional \$17,000.00 was raised, making a total of

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Blends with the Intestinal Contents, Soothes the Mucosa

*Metamucil is highly refined;
it stimulates the bowel
musculature, not the mucosa.*

When you specify Metamucil in constipation management you are selecting a product which has been made at least 99.6 per cent pure through a complete process of refinement.

All possible irritants (rough parts of the psyllium seed, undesirable oils and similar materials) are discarded during the refining process. A relatively small quantity of purified mucilloid powder is the result. To this is added an equal weight of pure anhydrous dextrose to insure complete dispersion in the colon.

Such meticulous preparation assures that only the bulk-producing mucilloid portion of the psyllium seed remains and that Metamucil will act as a purely "physiologic" constipation corrective, providing bland distention to stimulate the bowel muscularis.

The Metamucil mixture (formed by adding water to Metamucil) elicits gentle colonic reflex peristalsis. Evacuations are normally formed and are not irritating. The bowel stimulation imparted by Metamucil is only sufficient to clear the colon of its contents; patients are not annoyed by the re-

peated diarrheal evacuations that result from mucosal irritation by drastic cathartics.

The blandness of Metamucil makes it an ideal choice for constipation associated with a soft diet, constipation of pregnancy and in the aged and as an aid in reestablishing normal bowel habit after anorectal surgery. Daily use of Metamucil for a limited time will often return an atonic colon to normal function.

Metamucil® is the highly refined mucilloid of *Plantago ovata* (50%), a seed of the psyllium group, combined with dextrose (50%) as a dispersing agent. It is supplied in containers of 1 pound—also 4 ounces and 8 ounces.

G. D. Scarle & Co., Chicago 80, Illinois, Research in the Service of Medicine.



SEARLE

\$107,150.00 raised by the Auxiliary for Medical Education in 1955-56. The Arkansas Auxiliary ranked fourth in per capita contributions and received a certificate of Merit from the American Medical Education Foundation. Pulaski County also received a Certificate of Merit for its contribution of more than \$1,000.00.

A contribution of \$100.00 was made to each of the following: The World Medical Association; Crusade for Freedom; the Student A.M.A. Foundation for loans to medical students; and the Committee on Careers, National League for Nursing.

The amount made available through loans and scholarships for nursing education this year totaled \$148,331.52. Loans to student nurses amounted to \$42,475.77, scholarships \$100,876.75, for graduate study \$3,050.00 and for practical nurses \$1,929.00.

Subscriptions to Today's Health obtained by Auxiliary members have increased to 57,711 this year.

The Recruitment Program has been broadened to include all allied medical personnel and the name of the Committee changed from "Nurse Recruitment" to the "Recruitment Committee." A new Committee was created on Safety to promote safety in all phases of our daily living. The State reports indicated that 93 percent were promoting safety, Rural Health and Community Health studies; 85 percent were active in Civil Defense programs. Forty States are promoting a program in Mental Health and all of the States report active participation by their members in studies of medical legislation.

Under a variety of projects many of the States have programs relating to better child health and better care for our aging population.

Eighty-four counties have made surveys of the contributions made by physicians in time and money to charity and community affairs. The results of the surveys showed that the average physician, between the ages of 25 to 44 spends 14.19 hours each week in charity practice; 2.56 hours each week participating in community affairs; that he contributes an average of \$534.39 each year to charity and that the aggregate of his services to his community would be valued at a total of \$7,924.89. The age groups from 45 to 60 are slightly higher and for over 60 slightly lower.

Forty-six County Auxiliaries helped sponsor Science Fairs in their local high school and the National Auxiliary provided chaperones for two young ladies from California and Oklahoma who attended the Convention as National winners.

At the Post Convention Board meeting Mrs. Mason Lawson was named to represent the Auxiliary as liaison to the A.M.A. Rural Health Council.

Speakers at the two Convention luncheons were: Dr. Elmer Hess, retiring President of A.M.A., Dr. Dwight Murray, President of the A.M.A., and Mr. Leonard E. Read, President of the Foundation Economic Education, Inc. Miss Ilka Chase, noted Author and TV Star spoke at the Annual Banquet.

BOOK REVIEWS

Disturbances of Fluid Balance: John H. Bland, M.D. Published by W. B. Saunders Company, Philadelphia and London. 1956 Second Edition. Pp. 522.

This excellent textbook on body fluids and their disturbances is written by the Associate Professor of Medicine at the University of Vermont College of Medicine. It contains chapters on the basic physiological considerations, body water and electrolytes, and on hydrogen ion control. Following this are a series of chapters relating to pathological deviations induced by disease such as congestive failure, liver disease, pulmonary disease, etc. This book is very easy to read. In places, the author has italicized especially important sentences which are key thoughts in that particular article. Of particular interest in this book is the author's discussion of body fluids after surgery and trauma. This book is written in such a way that it will prove of interest to the medical student as well as the practicing physician.—A. K.

The Office Assistant in Medical or Dental Practice: Portia M. Frederick, Instructor, Medical Office Assisting, Long Beach City College, and Carol Towner, Executive Assistant, Department of Public Relations, American Medical Association. Pp. 351. Illustrated. 1956. \$4.75. W. B. Saunders Company, Philadelphia.

The authors point out in this little volume that the practice of medicine, and its allied professions is so varied from office to office that the job of being the office assistant to a physician or dentist is a specialty in itself. Because they then, try to cover the field, authors have included specific examples, and directions, for practically every phase or problem that comes to such professional offices. The book is concise, clear, a definite help to the secretary, office nurse and the receptionist. Any one of these can find a ready reference for a particular problem.

This book is undoubtedly the best one of its kind yet published.—F. R.

Roentgenographic Technique: By D. A. Rhinehart, M.D. Pp. 452. 216 illustrations. Philadelphia: Lea and Febiger. Price \$8.50.

This, the fourth edition, by the late Dr. Rhinehart has been revised to include some recent advances in diagnostic roentgenology. The text is detailed and comprehensive from a discussion of the principles of electricity to all phases of technical procedures. It continues to fill a needed place in the library of all who practice diagnostic roentgenology.—W. R. B.

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THORAZINE IN OBSTETRIC ANALGESIA

RAFAEL L. QUINQUILLA *

There has been an increasing demand for painless labor from the pregnant woman. There exists a variety of methods and combinations of them to render childbirth a painless event. Much has been said and discussed about whether pain should be a part of the process of reproduction in woman. Painless, or relatively painless, procedures of delivery certainly leave less emotional trauma in the parous woman; and although there is no analgesic method that solves the problem completely, I consider we have now in our hands a drug which definitely has a place in painless delivery.

Based upon two important actions of chlorpromazine hydrochloride (Thorazine)—(1) Its capacity to alleviate anxiety, tension, apprehension, and agitation, and to induce a state of unique tranquillity; (2) Its ability to potentiate central nervous system depressants; and after a careful study of the various works done by some investigators on the action of this drug, I ventured into a small clinical study of this drug in an attempt to find a simple, good, relatively safe procedure of obstetric analgesia for routine use in uncomplicated deliveries, primarily for the benefit of the obstetrician with a limited operative team.

I must state that it is not my intention to present here a new method of analgesia. I simply want to bring to your attention some additional clinical experiences in the hope that it will stimulate some comments, advice, and exchange of ideas in the use of this drug. I have simply tried some combinations of Thorazine with other drugs, and I have recorded my experiences. The structure and teamwork of our Obstetric Department at the Army and Navy Hospital certainly helped us in this clinical study.

All of our patients had at least four previous prenatal visits to our clinic. This gave us an opportunity to explain to the expectant mother the method of analgesia she was going to receive.

Doubts were explained and different methods of analgesia discussed with the patient. I found out that a patient prepared for a definite procedure, who knows about the method, certainly cooperates better and the results are more satisfactory. The nurses in the ward were instructed in the use of Thorazine, its action, and a team was established to work toward one goal, a painless labor. We equipped our labor room with black curtains, a soft indirect lighting system, and a nurse was at all times with the patient. Some of our patients were admitted to the ward two or three days before their expected date of confinement because of the great distance from their residences to the hospital. This did away with the fear of the primipara that she would not get to the hospital in time, and offered us further opportunities to prepare the expectant mother emotionally for her delivery. She had time to talk to the other expectant mothers in the ward, to the nurses, to the doctor, therefore becoming familiar with the team that was going to take care of her while in the hospital. She saw our method of analgesia right there at work and had a chance to get firsthand experience from the mothers that had already delivered. As soon as the patient went into labor, she was seen by the doctor in the labor room. The initial examination is done by the physician.

In all uncomplicated cases with an uneventful prenatal course 25 mgm of Thorazine are administered intramuscularly after the patient is given obstetrical preparation. External stimuli are excluded as far as possible. The doctor, nurse, and attendants should refrain from disturbing the patient beyond what is necessary. At varying intervals, according to frequency of pains, rectal examinations are done, blood pressure determinations, pulse, and fetal heart tones are recorded. According to the blood pressure findings, the frequency of contractions, and the general condition of the patient, the dose of Thorazine (25 mgm) is repeated at hourly intervals. It is our feeling that

*Captain, Medical Corps; Chief, Obstetric and Gynecology Service, Army and Navy Hospital, Hot Springs, Arkansas.

a drop in blood pressure of 10 to 20 mm of mercury after our first dosage of Thorazine is a contra-indication to repeat the dose, although in the cases studied the changes in blood pressure were never within alarming limits. We have never exceeded a dose of 75 mgm of Thorazine; our average dose is 50 mgm. Once the effacement and dilatation of the cervix are complete, the patient is administered in a slow intravenous injection 50 mgm of demerol plus 1/100 of a grain (0.65 mgm) of scopolamine diluted in 5 CC's of sterile distilled water. The patient is then taken to the delivery room. At this stage we have followed two procedures. First, trilene inhalations, self-administered; second, 50 mgm of demerol intravenously diluted in 5 CC's of sterile water is repeated. With the above method we have obtained the following results.

By administering Thorazine in early painful uterine contractions, that is, early cervical dilatation, some patients, especially primiparae who were tense and full of anxiety, relaxed; and many who were in false labor rested and awakened with no pain and were discharged from the hospital to return three or four days later in active labor. When Thorazine was administered to patients in actual labor, they woke up with the pains to utter a mild cry, to merge again into a restful sleep between pains. Thorazine did not affect uterine contractions or progress of labor. To the contrary, it seemed to help in the natural progress of labor, doing away with any unconscious straining or bearing down of the patient. Changes in blood pressure in the patient with no history of any cardiovascular disorder are minimal, and the blood pressure stabilizes itself readily. The best property of the drug is the restful sleep that the patient has after delivery which enables the operator to repair episiotomies or lacerations with no distress to the patient, and how the patient wakes up refreshed and free from pain, with complete amnesia of delivery. At no time was there any untoward reaction of mother or infant. Oxygen administration as advocated by some investigators during labor was not necessary. At no time did we get any apneic infant or was there any respiratory difficulty after administering Thorazine. In the majority of our patients outlet forceps was the method of delivery. Episiotomies, breech extractions, outlet forceps applications, even a case of digital extraction of placental residue, were all done under this procedure. At no time was there any need for general anesthesia.

We judged our clinical results by interviewing the patient twenty-four hours after delivery and

asked her to write a short opinion of the method of analgesia used, with no name on it, that she was to mail to us when she was discharged from the hospital. Here is a quotation of one of these comments from a primigravida where Thorazine with demerol, scopolamine analgesia was used:

"I can't remember too much of my labor, although I did not have trilene like a friend of mine in the ward. I had what the doctor explained to me was Thorazine, but I do not remember having much pain. I wasn't completely asleep when I went to the delivery room, and I do remember the baby coming and all the stitches; but that is funny, I could not remember the pain. I had always understood that after you had a baby you couldn't sit down for days, but I could sit down without a bit of trouble; and I haven't had any pain, and I really feel wonderful. I had always heard that labor pains nearly killed you and it took you forever to get over having a baby, but I really don't feel like I have even had a baby. If having babies are as easy as this baby was, I hope to have more."

Of the fifty-five letters received, twenty-one from primiparae and thirty-four from multiparae, there were 100 per cent favorable comments from the primiparae. Of the multiparae, 60 per cent preferred the method, 30 per cent preferred another method of delivery, and 10 per cent were indifferent.

Most of the multiparae with previous experience with other methods of analgesia prefer it primarily because of the restful sleep provided after delivery and the wonderful experience of awakening refreshed and able to be up and about and take care of their infant.

With our primiparae it worked to our advantage, since they had no previous experience with any method; their main fear was the episiotomy, and none of them could remember when it was done or when it was sutured. At no time did I observe excitement or restlessness in the patient as is frequently seen with the use of scopolamine and in trilene analgesia.

Now we ask ourselves what part does Thorazine add to the already known action of scopolamine, demerol, and trilene: (1) Safe doses of the drug provide relaxation, a prolonged restful sleep, without any untoward effect upon awakening; (2) It does away with the repeated use of short-acting narcotics with harmful cumulative effects both to the mother and infant and to the progress of labor; (3) Even at relatively high dosages no harmful effect to the mother or fetus is observed; (4)

It affords a way of reducing to a minimum the amount of narcotics and other analgesic drugs used and at the same time potentiate their effect (our best results we have obtained with the use of 100 mgm of demerol); (5) It does away with the untoward exciting effect of scopolamine (best results were obtained with 0.65 mgm of scopola-

mine; we never had any need for an increase of this dose).

Based upon the findings of a few cases that we have treated with Thorazine alone, I am starting a brief study in an attempt to use Thorazine as a sole method of analgesia.

The table that follows shows in summary form the fifty-five cases that we studied in this report.

TABLE I. SUMMARY OF CASES

Case No.	Age	Grava	Para	DRUG				BLOOD PRESSURE		Operative Procedures	Comments
				Mg Thora-zine	Mg Deme-rol	Mg Scopo-lamine	CC Trilene	Initial	Lowest Reading During Analgesia		
1	22	I	0	75	50	0.65	15	130/68	130/65	Episiotomy Outlet forceps	Satisfactory results
2	18	I	0	50	50	0.65	—	120/60	115/56	Episiotomy	Breech presentation
3	31	III	II	75	—	—	—	125/65	120/50	Episiotomy	Good analgesia. Patient complained slightly during episiotomy repair but made no attempt to interfere with repair
4	37	I	0	50	50	0.65	—	130/70	128/70	Outlet forceps	Good analgesia
5	23	V	IV	50	100	—	—	128/65	125/60	Episiotomy Outlet forceps	Good analgesia
6	31	V	IV	50	—	—	15	130/70	No change	None	Twin pregnancy. First delivery breech. Good analgesia
7	23	I	0	50	100	0.65	—	118/50	110/50	Episiotomy Outlet forceps	Good analgesia
8	18	I	0	75	50	0.65	—	126/55	125/50	Episiotomy	Breech presentation. Good analgesia
9	25	III	II	50	50	0.65	15	130/80	125/60	Episiotomy Outlet forceps	Good results
10	22	I	0	50	50	0.65	—	128/50	126/50	Episiotomy Outlet forceps	Good results
11	19	I	0	50	100	0.65	—	132/75	130/70	Episiotomy Outlet forceps	Good results
12	21	II	I	50	—	—	15	100/60	88/55	None	Good results
13	19	I	0	25	100	0.65	15	131/60	130/50	Episiotomy	Good results
14	36	V	III	25	50	0.65	15	120/70	102/64	Outlet forceps	Good results
15	21	I	0	50	100	0.65	15	118/70	114/70	Episiotomy Outlet forceps Digital extraction of placental residue	Good results
16	32	V	III	25	100	0.65	15	126/56	125/55	Outlet forceps	Good results
17	23	II	I	25	100	0.65	—	132/70	130/60	Repair of 2° laceration	Good results
18	33	III	II	25	150	0.65	15	120/80	114/60	Episiotomy	Good results
19	24	II	I	25	100	0.65	15	126/80	112/64	Episiotomy	Good results
20	36	IV	III	25	50	0.65	15	140/90	116/70	Outlet forceps	Good results
21	26	V	II	25	50	—	—	138/80	135/70	None	Premature delivery
22	23	I	0	50	100	0.65	—	110/66	102/56	Episiotomy Outlet forceps 3° tear in sphincter ani	Good results
23	23	II	I	50	100	0.65	—	128/60	120/50	Episiotomy Outlet forceps	Good results
24	20	II	I	50	100	0.65	15	137/71	130/70	Episiotomy Outlet forceps	Good results
25	19	I	0	50	50	0.65	—	130/85	115/60	Episiotomy Outlet forceps	Good results
26	22	III	II	25	100	0.65	—	110/88	100/64	Episiotomy Outlet forceps	Good results
27	19	I	0	25	100	0.65	15	110/60	No change	Episiotomy Outlet forceps	Good results
28	27	IV	III	25	50	0.65	—	116/60	110/50	Outlet forceps	Good results
29	29	III	II	25	50	0.65	—	130/80	104/80	None	Good results
30	20	III	I	25	100	0.65	15	110/60	90/58	None	Twin pregnancy
31	19	I	0	25	100	1/100	15	120/60	No change	Episiotomy Outlet forceps	Good results
32	19	I	0	50	100	0.65	15	90/50	80/45	Episiotomy Outlet forceps	Good results
33	24	III	II	50	100	0.65	—	110/70	90/60	Episiotomy Outlet forceps	Good results

TABLE I. SUMMARY OF CASES (Continued)

Case No.	Age	Grava	Para	Mg Thora- zine	DRUG			CC Trilene	BLOOD PRESSURE		Operative Procedures	Comments
					Mg Deme- rol	Mg Scopo- lamine			Initial	Lowest Reading During Analgesia		
34	29	II	I	50	150	0.65	15		126/76	100/68	Episiotomy Outlet forceps	Good results
35	16	I	0	50	100	0.65	15		110/70	No change	Episiotomy Outlet forceps	Good results
36	19	II	I	25	100	—	—		128/63	126/62	Episiotomy	Poor results
37	24	II	I	25	50	0.65	—		140/80	100/60	Episiotomy	Poor results. Patient very excited
38	32	II	I	50	100	0.65	—		110/70	90/60	Episiotomy	Good results
39	21	III	II	50	—	—	—		125/55	120/50	None	Relatively good analgesia
40	22	II	I	50	100	0.65	—		102/74	110/70	Episiotomy	Good results
41	18	II	I	50	100	0.65	15		100/64	100/60	Episiotomy Outlet forceps	Good results
42	20	III	II	25	100	1/100	15		130/80	125/75	None	Good results
43	20	II	I	50	100	0.65	—		104/82	No change	Episiotomy	Good results
44	19	I	0	50	100	0.65	15		124/68	120/50	Episiotomy Outlet forceps	Good results
45	25	III	II	50	50	0.65	15		100/50	90/40	Episiotomy	Good results
46	23	I	0	50	50	0.65	15		100/68	100/55	Episiotomy Outlet forceps	Good results
47	28	II	I	50	100	—	15		140/75	130/70	None	Good results
48	30	I	0	50	100	0.65	15		135/80	130/70	Episiotomy Outlet forceps	Good results
49	25	I	0	50	100	0.65	15		120/75	120/65	Episiotomy Outlet forceps	Good results
50	18	II	I	50	100	—	15		134/62	130/60	Episiotomy Outlet forceps	Good results
51	19	I	0	75	50	—	15		120/54	100/50	None	Good results
52	17	I	0	50	100	0.65	—		123/61	120/60	None	Good results
53	25	II	I	50	100	—	15		125/50	115/50	None	Good results
54	24	II	I	75	50	0.65	—		126/55	125/50	Episiotomy	Breech presentation
55	21	II	I	50	100	0.65	15		130/72	125/60	Episiotomy	Good results

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A PLEA FOR ANATOMICO-PATHOLOGIC REPORTING OF THE ROENTGEN FILM

WILLIAM SNOW, M. D.

Roentgen study of the lungs can be reported in terms of anatomico-pathologic change. Such terms as "a mottled shadow" or "a density" can be avoided. The key to more exact interpretation is an understanding of the role of the bronchial tree in lung changes.

Four main phenomena related to the bronchial tree may be recognized:

1. Emphysema, caused by check valve obstruction.
2. Atelectasis, caused by complete block.
3. Edema, caused by partial obstruction with a build-up of carbon dioxide behind the block.
4. Drainage through the bronchial tree.

All these phenomena often occur together and must be recognized for proper reading of the roentgenogram.

EMPHYSEMA

Massive emphysema due to involvement of the main bronchus is well understood. Its significance in the diagnosis of neoplasm of the bronchus or with aspirated foreign body is generally known.

Regional emphysema causes check valve by obstruction to a second or third order bronchus, is also reported by most workers and is most fre-

quently seen with broncho-pneumonia or neoplasm.

Bullous emphysema is found with check valve obstruction to a fourth or fifth order bronchus. It is seen in acute and chronic lung disease and may be reversible or irreversible. This is often termed cystic lung or cavitation. However, cystic lung implies a developmental change and the term cavitation requires further clarification. (Figure 1.)

What is lung cavity? Actually, there are different kinds. A metastatic staphylococcus abscess breaks into the bronchial tree, showing a fluid level and forms a lung cavity. (Figure 2.)



Figure 1. Freidlander pneumonia with extensive broncho-pulmonary reaction. Checked by autopsy. Film shows many bullae and much clover-leaf or rosette bronchiolar emphysema.



Figure 2. Metastatic lung abscesses of staphylococcus aureus infection. Fluid level caused by break into a bronchus.

Thrombosis of vessels occurs with a pneumonia. The organisms liberate enzymes which digest the lung, giving a necrotic shaggy lung cavity often with a fluid level. A neoplasm of the lung breaks down. It may also be infected. It drains into the bronchial tree and shows up as a lung cavity. Aspirated organic material lodges in a bronchus

following the pulling of a tooth, or a tonsillectomy. The infected nidus causes a bulla distally, usually of a fourth or fifth order bronchus. These measure about 4 cm in diameter and soon become infected and foul, showing a fluid level, forming a foul lung cavity. Endobronchial disease as with tuberculosis or fungi or even pneumonia, likewise produces bullae. When the infection spreads into the walls of the bullae, they can be considered as cavities. When cavities and bullae are considered with this approach, a logical anatomico-pathologic description may be given to the roentgen report of the chest.

Bronchiolar emphysema is caused by check valve obstruction to the bronchioles. The nests of alveoli distally, are overdistended into clover leaf rosettes, whose walls are somewhat compressed by being distended with air. This may be due to disease within or without the bronchiole, acute, subacute, or chronic. It is often referred to as mottled lung. When it is of short duration, a matter of days, it is usually caused by a broncho-pneumonia or bronchiolitis. The subacute and chronic lesions may be due to a chronic or unresolved pneumonia. On the other hand, miliary lesions regardless of etiology, often cause pressure on the bronchioles, and also produce clover leaf rosette emphysema. If this is kept in mind, the roentgen appearance may be adequately interpreted. Low power microscopic study of bronchiolar emphysema (Figure 3) shows rosettes much like the roentgenogram. (Figures 1 and 4.)

ATELECTASIS

Massive atelectasis is generally recognized and described from the roentgen film of the lungs. It is caused by complete obstruction to the main stem bronchus. It may be sudden as with aspira-

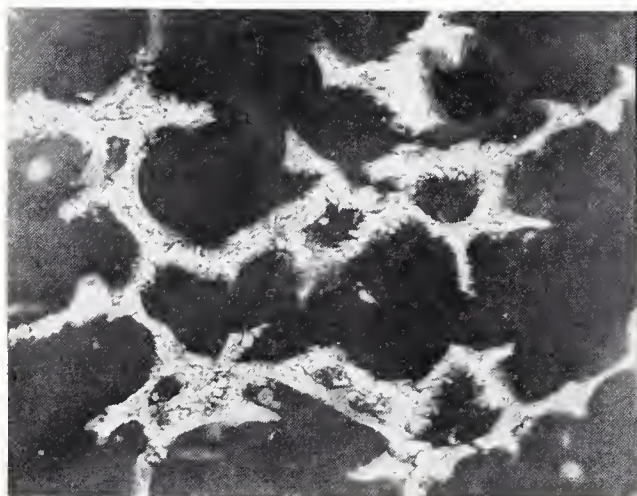


Figure 3. Low power microscopic view of bronchiolar rosette emphysema. Looks the same as the roentgenogram.



Figure 4. Miliary tuberculosis. Some of the nodular densities are caused by miliary tubercles. Others are due to bronchiolar atelectasis. Bronchiolar rosette emphysema is visible and is caused by check-valve block from the tubercles.

tion during an operation or an epileptic seizure or gradually as with neoplasm.

Lobar atelectasis or atelectasis of a good part of the lobe is well described in roentgen reports and needs little comment. It is often a clue to a neoplasm. However, pneumonia often is associated with some atelectasis due to inflammation or secretions in the bronchi.

Streak atelectasis is evidenced as a miliary or submiliary nodule and is caused by obstruction to a bronchiole either by intrinsic or extrinsic involvement. When present with broncho-pneumonia or bronchiolitis, these nodules are of short duration and will often clear in a week or two. Spill-over from tuberculous cavities to the bases will often cause such nodular bronchiolar atelectasis. When the cavity clears, the nodules also clear, probably because the blood supply at the bases is richer than at the apices which prevents the tubercle bacilli from taking hold. Nodulation in miliary tuberculosis, silicosis, dust diseases, fungus infection, sarcoidosis, and miliary carcinomatous metastases may also produce nodular bronchiolar atelectases. Thereby, two types of nodules may be present, one by the disease itself and one by the atelectasis, and, they cannot be distinguished one from the other on the films.

EDEMA

In order to produce edema of the lungs, it seems that two conditions have to exist, one, an adequate circulation and, two, an increase in carbon dioxide tension. Since the circulation is richest near the lung roots extending to the bases, anoxic edema with left heart failure also occurs in these locations. Two types can be seen: That caused by partial obstruction of large bronchi and that caused by medium sized bronchi. The increased carbon dioxide tension causes an increase in the hydrogen ion concentration which causes an out-pouring of fluid into the alveoli and bronchi. Under normal conditions, this is helpful in loosening secretions, diluting irritants and floating foreign matter. In excess, the lung becomes loaded with water like a sponge. Indeed, the

and downward from the lung roots. The interpretation of lung infarction from the film study becomes clear. Secondary to vascular damage or obstruction, there occurs bronchial spasm. Two conditions are thus brought about, slowed circulation and slowed removal of carbon dioxide, and together they cause anoxic edema. This hides the infarct. In addition, there occurs streak atelectasis which cannot be separated from the picture of infarction. After the edema of the acute stage clears, the infarct and streak atelectasis become visible.

Although there is increased carbon dioxide tension in the lungs with chronic emphysema, there is no anoxic edema. This can be explained by the fact that in such emphysematous lungs, the capillary bed is compressed so that there is no fluid available to weep into the alveoli.

DRAINAGE

This has been brought into discussion under the other headings. Drainage has to be free in the bronchial tree otherwise the phenomena of emphysema, atelectasis, and edema may develop.

Sometimes an empyema, especially if it is interlobar or almost always interstitial metastatic abscess breaks into a bronchus to establish drainage. The appearance is that of a cavity usually with a fluid level.

RATE OF CHANGE

The rate of change in the day by day, week by week, or month by month study together with other significant facts in a case helps the radiologist to decide the cause of the anatomico-pathological changes demonstrated on the film. Such information must be available in order to evaluate the roentgen findings.

SUMMARY

Some main factors in the role of the bronchial tree in lung disease causing emphysema, atelectasis, and edema have been presented. The use of this line of reasoning makes it possible to make an anatomico-pathologic diagnosis and avoids resort to non-descript vague terms.

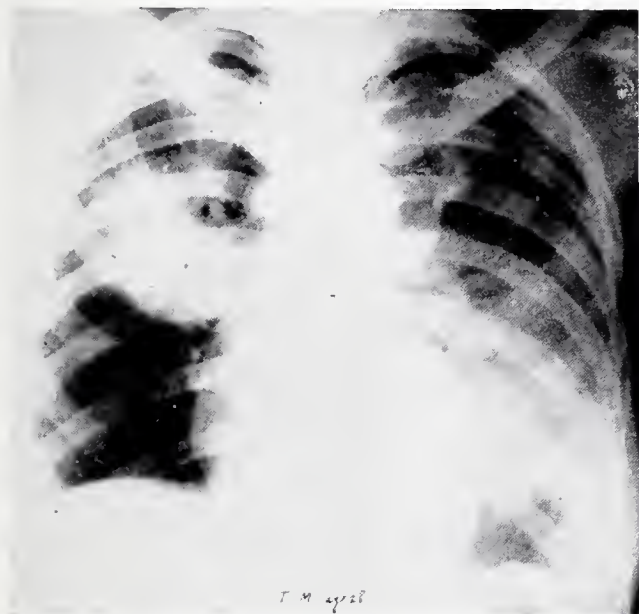


Figure 5. Pneumonia right upper and left lower lobe. The right upper lobe is cotton-like and fluffy. This is caused by anoxia and is seen only with acute lung reaction.

appearance of the film is often like a wet dripping sponge. A whole lobe may be involved, as with pneumonia dominated with an anoxic reaction. The lobe looks swollen. (Figure 5.) With acute left heart failure confluent cotton-ball like blotches of wet lung are seen reaching outward





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¹Posner, A. C., *et al.*; Further Observations on the Use of Tetracycline Hydrochloride in Prophylaxis and Treatment of Obstetric Infections, *Antibiotics Annual* 1954-55, pp. 594-598.



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PREPARATION FOR MEDICINE

JAMES S. DINNING *

(Presented to the Arkansas Medical Society,
April 25, 1956)

My assigned topic, "Preparation for Medicine," is a subject about which most interested people have and express rather firm convictions. It is a subject particularly suited to the formation of firm convictions because it is quite difficult to prove or disprove a particular recommendation. By preparation for medicine we usually mean the college work the student takes before entering medical school. For purposes of this discussion we may consider this work to serve two purposes: (1) to prepare the student for his medical studies and (2) to contribute directly to the student's future career in the practice of medicine. We should then measure the success of the student's preparation by the success he achieves in these two endeavors.

It is somewhat frustrating for an experimental scientist to attempt to evaluate the success a physician achieves in his medical career. As a scientist a person is trained to make accurate observations and then form his conclusions. It is an axiom in such a procedure that the observations be accurate and reproducible. We all know that it is impossible to quantitatively measure the success of medical education by evaluating the quality of the product. The whole situation is too complex. It is possible however to evaluate a person's success in passing courses in medical school and this morning I wish to discuss some factors which are related to success or failure of the medical student in his academic work. This is a subject of great interest to me not only as a teacher of medical students but particularly in relation to my work on the Admissions Committee. The primary job of an admissions committee is to select students who have the greatest probability of successfully completing their medical education and engaging in the practice of medicine. Or, to put it in other words, an admissions committee attempts to evaluate a student's preparation for the study of medicine.

Since admission procedures are designed to select the students who are best prepared to engage in the study of medicine, we can logically start our discussion with a consideration of the criteria employed by the admissions committee in their selection procedures. There are four major criteria: Pre-medical grades, Medical Col-

lege Admission Test (MCAT) scores, Pre-medical Advisors recommendations, and personal interviews by members of the Admissions Committee and the Psychiatry Department. The pre-medical advisors' recommendations and the results of the personal interview are primarily a yes or no procedure. If it develops that the pre-medical advisors report that an applicant is intellectually dishonest, a thief, a chronic alcoholic, or is completely unable to get along with people or some other drastic shortcoming, such a person would be excluded from consideration. All of our applicants are interviewed by a member of the Admissions Committee and by a member of the Psychiatry Department. Here again, if an applicant appears to be seriously mentally ill or suffering from serious personality problem, he will be excluded from consideration.

The results of the Medical College Admissions Test are an important factor in our selection procedures. This test is administered to all medical school applicants all over the country. The test is usually taken during the second or third year of pre-medical work. There are four sections of the test: science, verbal, modern society, and quantitative. The science section is a measure of the student's general science background and reflects high school and college training. The verbal section measures a student's ability to use the language. Modern society measures the student's knowledge of current events and of the world we live in. The quantitative section measures the student's ability to use numbers. The score a student makes on this test reflects both his I.Q. and the extent of his factual information. The test is scored from 200 to 800 with the mean score of all students taking the test of 500.

After eliminating any obviously unfit students based on the pre-medical advisors' report and the personal interview, we then use the pre-medical grades and MCAT scores as our chief criteria for the final selection. The next logical question is of course, how good are these criteria? We have attempted to answer that question. We are carefully studying the records of our last several classes and correlating their success in medical school with their scores on the admissions criteria. I should like to give you some of the results of our study, First pre-medical grades: Of the students with pre-medical grade point averages of less than 3.0, this is about a C+ or B-, 40 per cent experienced difficulty in medical school

*Associate Professor of Biochemistry, University of Arkansas School of Medicine.

as evidenced by failure in one or more major courses. In contrast, of the students with a pre-medical grade point greater than 3.0 only 18 per cent failed a major course. Thus it is apparent, and I am sure of no surprise to any of you, that there is a strong correlation between a student's performance in his pre-medical subjects and his performance in medical school.

The MCAT scores were found to be equally predictive. Among the students with MCAT scores of less than 440 there were 41 per cent failures, while among students with MCAT scores greater than 440 there were only 20 per cent failures. Of the students admitted to medical school with MCAT scores less than 440 and pre-medical grade points less than 3.0, more than one-half were in the failing category. These results suggest to us that our admissions criteria are sound.

There is another factor which strongly influences performance in medical school. We have found that older students, and particularly students who have been out of school for several years, frequently experience difficulty in medical school. We of course know of many exceptions and I am sure that many of you entered medical school late in life, but an admissions committee, trying to select the students with the greatest probability of successfully completing their medical education, cannot ignore these statistics.

We now come to the problem of what courses the pre-medical student should take. In recent years there has been a decided shift in medical educators' recommendations on the subject. It is now generally believed that the pre-medical student should get a broad education with emphasis on cultural subjects rather than science. There is a good basis for such recommendations. In medical school, particularly in the first two years, the student takes only science courses. He does not have an opportunity to become educated in the broad sense. We know that physicians are the leaders of their communities. They are frequently looked to for guidance in all local problems. It is only reasonable that a good edu-

cational background in civics and history would aid in their performance of these duties. Also many, probably a majority, of the patients of an average physician have sociological problems related to their illness. A good background in sociology, with knowledge of the cultural patterns of various social groups, should aid the physician in dealing with these people. There is, however, a possibility for this de-emphasis of science to swing too far. I recently had occasion to check the Nobel Prize winners in medicine for the years since 1948. The group included 8 chemists, 5 bacteriologists, 1 clinician, and 1 physiologist. There is a place for the scientist in the medical profession and we should encourage good science students to enter medicine.

There is one recommendation which we feel can be definitely made. The pre-medical student should not take courses which he will later repeat in medical school. Many do this with the feeling that these courses will be easier for them in medical school. This does not appear to be true, at least for all courses. A few years ago Doctor Langston investigated this matter and found that in Microanatomy there was no difference in the final grades of students who had the course in pre-medical work as compared to those who had not.

We do not know exactly what courses the pre-medical student should take. In fact it is very unlikely that all students should follow the same curriculum. After all, graduates of medical school engage in a variety of endeavors. Some do research in very restricted fields, some are engaged in medical legal work, some are teaching, others limit their practice to certain fields and a considerable number engage in general practice. We feel, in general, that the pre-medical student should follow his own inclination in choosing his curriculum; if he likes physics, let him major in physics; if he likes sociology, let him major in that. Our requirement is that whatever curriculum he chooses he do a good job with it.

★ Editorial ★

AMERICAN LEGION AND AMERICAN MEDICAL ASSOCIATION

Guest Editorial: R. B. Robins, M.D., Camden, Arkansas

The American Legion and the American Medical Association have had differing viewpoints on veterans medical care in the past several years, but in many areas the two national organizations are working together on many fine objectives. They do and they should work together in the fight against communism and all other subversive influences. They should work together to defend and improve the free enterprise system and to build a positive understanding of Americanism. They are working together for national defense, better health, child welfare and other goals designed to bring about sound, evolutionary progress within the framework of American democracy.

Major General George F. Lull, a physician, who is now Secretary-General Manager of the American Medical Association, appeared on the program of the annual convention of the Arkansas Department of the American Legion at El Dorado, Arkansas, July 21, 1956. Dr. Lull made a splendid plea for cooperation between the American Legion and the American Medical Association.

We should remember that one of the prime techniques of communist subversion is to propagate class hatred—to create and promote argument and dissension—to pit one group against another for the purpose of undermining national unity. It would indeed be tragic if the American Legion and the American Medical Association—two of the nation's most influential and patriotic organizations—should allow themselves to become pawns in the communist game of "divide and conquer." Dr. Lull's address to the Arkansas Legion was most stimulating.

It should be of great interest to the medical profession of Arkansas and the United States that Dr. Garland Murphy, Jr., of El Dorado, Arkansas, was endorsed at the convention as a candidate for National Commander. The American Legion has never had a physician as a National Commander in its entire history. Dr. Murphy has had a distinguished record in American Legion affairs having served as State Commander and now a member of the National Executive Committee. He deserves the support of every physician in this country.

MEDICINE IN THE NEWS

Dyess in East Arkansas, a community of 3,000 people, is anxious to locate a physician. For three years, the Arkansas Gazette reports, there has been no physician in Dyess. A small hospital building is in the community.

(American Hospital Association Press Information)

Chicago.—"In U. S. hospitals of all types, expenditures per patient day rose 116 per cent in the last ten years, and in the nonprofit short-term general hospitals the rise was 141 per cent," Ray E. Brown, president of the American Hospital Association, declared recently.

Mr. Brown, superintendent of the University of Chicago Clinics, stated that expenditures per patient day in hospitals of all types rose from an average of \$5.21 to \$11.24 between 1946 and 1955, while expense per patient day in the nonprofit short-term general and special hospitals increased from \$10.04 to \$24.15.

The AHA president said, "Hospital care has become more expensive as it has offered more diversified services for treating and caring for patients." He said the increase in hospital expenses also reflected the rise in payrolls and the increased cost of supplies and equipment.

Thousands of World War II and post-Korea veterans who lost their 5-year term GI insurance since July 23, 1953, because they had failed to pay either or both of the last two monthly premiums will be given an opportunity to reinstate their policies under a new law just signed by the President.

VA said it is searching its records for these cases, so it soon may send each former policyholder a reinstatement application with instructions on how to proceed.

The new surgeon general of the PHS is Dr. Leroy E. Burney, a career officer in the commissioned corps and for 10 years commissioner of health for the state of Indiana. Until his nomination by the President he was deputy chief of the PHS Bureau of State Services. Dr. Burney received his medical degree from Indiana University.

Social Security Amendments: Changes in the 21-year-old social security law now include (1) Old Age and Survivors Insurance payments to disabled workers at age 50, paid from a "separate" fund, (2) extension of social security to some 250,000 dentists, lawyers, osteopaths and other self-employed persons, (3) lowering of retirement

age for social security purposes for women from 65 to 62, (4) earmarked payments for medical care of public assistance recipients, and (5) increase of payroll deductions by one-half of 1 per cent and three-eighths of 1 per cent for the self-employed.

The World War II GI loan program ending date has been extended for one more year to July 25, 1958, under an omnibus GI loan law signed by the President recently.

In the 12 years the GI loan program has been in operation, 4,466,000 World War II veterans have borrowed \$33.2 billion in GI loans to purchase homes, farms and businesses. Of that amount, VA has guaranteed or insured \$17.9 billion.

Chicago.—A new vaccine, developed to combat certain respiratory diseases, was found in a recent preliminary study to reduce the expected rate of illness by more than half, four researchers have reported.

The vaccine, developed at the National Institute of Allergy and Infectious Diseases, Bethesda, Md., was made of types 3, 4, and 7 adenoviruses, which cause acute feverish respiratory diseases. These diseases resemble grippe and are not of the "common cold" variety.

The vaccine was given to approximately 4,000 recruits at the U. S. Naval Training Center, Great Lakes, Ill., between January and April, 1956. These men plus 12,000 others who did not receive the vaccine were observed for the occurrence of the diseases. From 50 to 70 per cent of the expected number of illnesses were prevented by the vaccine, the researchers said in the current (Aug. 18) *Journal of the American Medical Association*.

Most of the illnesses that occurred in the group not receiving vaccine were caused by type 4 adenovirus.

Ground breaking for the new hospital in Forrest City was started in August. The one story hospital will be completely air-conditioned and will contain 65 beds. The hospital will be known as the Forrest Memorial Hospital.

The University of Arkansas Board of Trustees has given its approval to making a contract with the city of Little Rock and the Arkansas Children's Hospital so that the Arkansas Children's Hospital can use the old University Hospital building temporarily.

The building committee of the Davis Hospital Board, Pine Bluff, has taken steps to secure \$3,330,000 in federal funds to help in the construction of a 250 bed addition to the Davis Hospital. An architectural firm has been engaged to draw plans for the addition.

FCDA Outlines New "National Survival" Plan

The Federal Civil Defense Administration has announced a new "national plan for survival" in the event of an enemy attack. The publication, entitled "The National Plan for Civil Defense Against Enemy Attack," replaces a 1950 study of the National Security Resources Board, which has become outdated since the development of the hydrogen bomb. The new plan is divided into two broad phases of civil defense activity; preparations that must be made during the pre-attack period, and actions that must be carried out during the emergency period immediately before and following an enemy attack.

FCDA points out that the document is not an operational plan, but "provides a broad base upon which operational plans—national, regional, state and local—can be developed." It is directed primarily at state and local civil defense directors and their staffs, but is also designed to serve as a planning for Federal agencies, national organizations and others cooperating in the civil defense program. The agency stresses that the plan reflects current thinking only and is not intended as a presentation of future plans. Revision would be essential if a potential aggressor developed the ability to attack with inter-continental ballistic missiles, produced atomic-powered planes, or developed new techniques for chemical or biological warfare, FCDA adds. Copies of the plan may be obtained for 55 cents through the Superintendent of Documents, Government Printing Office, Washington 25, D. C.

The Pulaski County Medical Society has developed a brochure to welcome newcomers to the city of Little Rock and Pulaski County. The brochure will be distributed by the Little Rock Chamber of Commerce to each newcomer of Pulaski County. It contains information about medical care in Pulaski County and particularly underscores what to do in event of a medical emergency.

(Excerpt—from the Secretary's Letter, AMA)

The Physicians Forum, which was once spearheaded by a committee headed by the late Ernst P. Boas of New York, is passing the hat again among doctors for funds to finance a campaign

to get social security for doctors. The Forum recently mailed a four-page brochure to every doctor in the United States, practically the same kind of brochure that it mailed back in 1952.

The response from doctors will probably be no better this time than it was in 1952. Too many honest and sincere physicians recall the activities of The Physicians Forum a few years back.

The Forum, which labeled itself the "voice of the liberal doctor," once championed the fight in behalf of the Wagner-Murray-Dingell bill providing for compulsory national health insurance. Many physicians also remember how, in November, 1945, The Physicians Forum issued a statement saying that it "strongly approves the message of President Harry S. Truman calling for the establishment of a nationwide health and medical care program to supply the medical needs of all Americans regardless of income, race and religion."

Within the next few weeks, the AMA Journal will publish a series of two excellent articles dealing with the subject of social security for physicians. The articles strongly refute the statements and arguments presented in The Physicians Forum brochure, showing beyond question that they are false and misleading.

ANNOUNCEMENTS

The next and Tenth Inter-American Congress of the Pan American Medical Association will be held in Mexico City. The scientific sessions will begin on Monday, November 18, 1957, at 9:00 A. M. The Congress will be held in Sections covering all branches of medicine and surgery.

Management of Carcinoma of the Breast will be the topic for the first annual clinical symposium to be held November 9 and 10 at The University of Texas M. D. Anderson Hospital and Tumor Institute, Houston, Texas.

The Fifth Councilor District Medical Society met in Camden Thursday evening, October 4, in dinner session at the Camden Hotel at 7 P. M. Speakers were Dr. Raymond Cook of Little Rock who discussed "The Eye and the General Practitioner," and Mr. John Bach, Director of Publicity of the American Medical Association, of Chicago.

Mr. Bach addressed the student body of the University of Arkansas School of Medicine in the afternoon.

Arkansas

TRAVELING

And Clipping Bits Here and There

(From the World Medical Association,
Secretary General's Letter)

"Protection" or Creeping Paralysis?

The continuous flood of "News" releases from such sources as the International Labour Organization, the International Social Security Association, and various so-called international peace organizations bring almost daily reminders of the "protection" these organizations sponsor in their unending struggle to socialize the entire world. The announcements of new or increased social security "protection" in and outside national boundaries has ceased to be news. The doctrine of protectionism has assumed an epidemic status as its "benefits" are applied by the "protectors" to the peoples of every nation of the world.

Is this "protection" really a "safe conduct" and freeing of the people or is it a malignant creeping paralysis that will eventually atrophy private initiative and personal responsibility and "protect us out of all we own"?

"Protection" in Hungary: Prior to the current government regime in Hungary many professional people—doctors, engineers, architects and industrialists—earned their living and provided for their eventual retirement through private practice based upon the principles of free enterprise and initiative. These individuals never held official government positions. Today these enterprising professional people are simply starving to death and the current government refuses to recognize their status or provide them with any means of support.

Benefit payments under voluntary health insurance programs, designed to help people pay hospital and doctor bills, are running 20 per cent higher so far this year than in 1955, the Health Insurance Council announced August 15, in releasing the findings of its annual survey of the extent of voluntary health coverage in the United States. In 1955 such payments amounted to 2.5 billion dollars.

The increase in benefit payments, the Council said, reflects both the progress made by the American people in bringing their health insurance protection to more nearly adequate levels, and the continued spread of ownership.

For purposes of clarity the Medical Society of the State of New York outlines the following principles to guide physicians who appear on TV or radio programs:

(a) Doctors of medicine are expected to refrain from sponsoring products directly or by implication that are not accepted by the medical profession, i.e., patent medicines.

(b) When introduced as a doctor, such individual cannot escape the implication of representing the medical profession, and his conduct should be in keeping with the high standards of the profession.

(c) Sound judgment, good common sense, and adherence to the **Principles of Professional Conduct** are expected of any physician when appearing on radio or television in whatsoever capacity. It is the responsibility of the county society Board of Censors to discipline its own members who violate these fundamental qualities.

LETTERS TO EDITOR

Change in Director of Postgraduate Medicine

It has been a pleasure to serve as the Director of the Office of Postgraduate Medicine of the Medical School and to serve the profession through these activities during the past several years.

This is to inform you that my responsibilities in this area have been transferred to Doctor Riffin.

I have enjoyed working with the several Committees of State Societies and wish to express my sincere appreciation for the counsel, assistance and cooperation of the many physicians who have worked with us over the years.

I shall continue my interest in this field and hope to expand the postgraduate activities in Obstetrics and Gynecology. You will hear from us this fall regarding these programs, and we will look forward to seeing you at the Medical Center.

Willis E. Brown, M. D.

PERSONALS AND NEWS ITEMS

It was announced by the Holt-Krock Clinic in Fort Smith that Dr. Elmer M. Purcell, formerly of Little Rock, has joined their staff.

Dr. Jerry Sexton has begun his general medical practice in Waldo.

Moving to Berryville to practice is Dr. Wayne P. Jones. He was formerly at Marshall.

Dr. John E. Alexander has begun his practice in general medicine in Magnolia.

Dr. Paul Mahoney, Little Rock, has been invited by the American Otorhinologic Society for Plastic Surgery to act as moderator at the roundtable discussion at the Society's next meeting in the Morrison Hotel, Chicago, October 14, 1956. He has been invited by the same society to participate in giving a course in plastic surgery at the Louisiana State University in New Orleans, February 17-22, 1957.

The Mountain Home Chamber of Commerce has elected Dr. B. N. Saltzman as its president.

Moving to Magnolia is Dr. Fred Lee. Dr. Lee will be associated with Dr. H. W. Thomas at his clinic in the practice of medicine and surgery. Dr. Lee was formerly at Lake Village.

The Veterans Hospital at Fayetteville has added Dr. James H. Sisson to their staff. He will take over as Chief of Pathology.

The Cooper Clinic in Fort Smith has announced the association of Dr. W. M. Moten, in the practice of dermatology.

Dr. Dallas Dalton, Jr., formerly of Trinidad, Colorado, has moved to McGehee and is associated with Dr. Swan B. Moss in the Memorial Clinic.

Dr. L. H. McDaniel, Tyronza, delivered the commencement address to the summer graduating class at Arkansas State College in Jonesboro.

Dr. Oliver C. Wenger of Hot Springs is now in Chicago working with Dr. Herman N. Bundesen, the city health officer of Chicago, to help stamp out the poliomyelitis epidemic.

New residents of Fort Smith are Dr. and Mrs. Arthur F. Hoge, Jr., and their children. He is now associated with his brother, Dr. Marlin B. Hoge.

Dr. T. D. Brown of Little Rock, president-elect of the Arkansas Medical Society, headed a group of 18 doctors, nurses, newsmen and businessmen from Arkansas who spent two days at Fort Sam Houston, Texas, in August, as guests of the 916th Mobile Army Surgical Hospital Unit from Little Rock. The 916th was taking two weeks of summer training at the Fort; it is commanded by Major Nicholas W. Riegler, Jr.

The American College of Obstetricians and Gynecologists announces the following Arkansas physicians will be chairmen in their respective districts: Robert W. Ross, Clyde D. Rodgers, and Willis E. Brown.

The newly appointed chief of the urology section of the surgical service at the Veterans Administration Hospital at Little Rock is Dr. John William Barnett of Cedar Rapids, Iowa.

Dr. Jim Bethel has joined Dr. B. C. Page at the Bauxite Clinic.

Dr. Lamar McMillin and his family, Little Rock, attended the fifth annual reunion of the McMillin and related families near Louisville, Mississippi, in August.

Doctor Ellis Honored

At the Seventy-First Annual Commencement of the Washington University School of Medicine in St. Louis last June, Dr. Edward Forrest Ellis, Fayetteville, Arkansas, was given an honorary membership in the school's Alumni Association. He was cited as the oldest graduate who still was in practice.

Dr. Ellis celebrated his 93rd birthday at his home in Fayetteville on August 19. Many friends called by his home on the occasion. The Journal extends its hearty congratulations.

PROCEEDINGS OF SOCIETIES

The Southeast Arkansas Medical Society and Auxiliary held their regular dinner meeting at the Greystone Hotel in McGehee, July 16th. Dr. G. C. Johnston, Lake Village, was in charge of the program and presented as speakers, Dr. Will Christensen and Dr. John Harold of Little Rock.

The Arkansas Society of Technologists held its first meeting in Paragould August 5. Approximately 30 members attended.

Dr. and Mrs. A. L. Carter entertained thirty-five members of the Boone and Carroll County Medical Associations and their wives with a barbecued chicken dinner at their farm home west of Berryville July 27.

At an election held by the Saline County Medical Society, June 12, 1956, the following officers were elected: President, Theodore C. Swinyar, M. D.; Secretary-Treasurer, H. B. Thorn, Jr., M. D. The newly elected officers will serve for a period of one year beginning July 1, 1956.

Office of the Executive Secretary

Public Law 569, passed by Congress in June of this year, authorizes government paid medical care for dependents of members of the armed forces (the program is called "Medicare"). Many meetings have been held by your officers and the Council to consider the problems of implementing the law in Arkansas.

On August 5th, the Council of the Arkansas Medical Society voted for the Society to cooperate in the plan and directed that a committee composed of members of the various specialties and general practice be appointed to devise a fee schedule upon which the Society can negotiate with the Department of Defense.

The Department of Defense has stated that they do not want a "cut rate" schedule for military dependents. What is desired is a schedule of fees usually charged in Arkansas. This is not an insurance program and fees should be set up on a full-service basis.

Attached is a list of the committee appointed to establish the fees for this program in Arkansas:

Medicare Fee Schedule Committee

Chairman: Fount Richardson, 316 W. Dickson, Fayetteville, Hillcrest 2-8217.

Vice Chairman: L. H. McDaniel, Tyronza, 3185.

Secretary: Mr. Paul C. Schaefer, Kelley Bldg., Fort Smith, SUnset 2-6152.

GENERAL PRACTICE: James M. Kolb, Clarksville, 132; Jack Kennedy, Arkadelphia, 48; Ben Saltzman, Mountain Home, 11.

INTERNAL MEDICINE: Euclid M. Smith, 236 Central, Hot Springs, NAtional 3-3384; Jerome S. Levy, 1425 W. 7th, Little Rock, FRanklin 5-5521; Ralph E. McLochlin, 501 Woodlane, Little Rock, FRanklin 5-3231.

GENERAL SURGERY: Henry G. Hollenberg, Waldon Bldg., Little Rock, FRanklin 5-2321; J. J. Monfort, Batesville, 733; Joe B. Wharton, Jr., 312 N. Jefferson, El Dorado, UNion 3-4101.

ALLERGY: Alan G. Cazort, 1427 W. 7th, Little Rock, FRanklin 2-1160.

ANESTHESIA: Agnes Kolb, 30 Lenon Drive, Little Rock, MOhawk 3-7930.

DERMATOLOGY: Ellis P. Cope, Donaghey Bldg., Little Rock, FRanklin 4-8884.

OPHTHALMOLOGY: K. W. Cosgrove, Meers Bldg., Little Rock, FRanklin 2-0951.

OTOLARYNGOLOGY: A. J. Brizzolara, Donaghey Bldg., Little Rock, FRanklin 2-6881.

GYNECOLOGY: Eugene T. Ellison, 619 Main, Texarkana, 3-5173.

OBSTETRICS: Clyde D. Rodgers, 1429 W. 7th, Little Rock, FRanklin 5-9167.

NEUROLOGY: Charles R. Watson, Donaghey Bldg., Little Rock, FRanklin 5-5547.

PSYCHIATRY: Louis A. Cohen, 814 W. 3rd, Little Rock, FRanklin 4-3815.

PEDIATRICS: Thomas E. Townsend, 1310 Cherry, Pine Bluff, 6626.

PROCTOLOGY: Marion S. Craig, Jr., Waldon Bldg., Little Rock, FRanklin 5-2395.

RADIOLOGY: W. R. Brooksher, 100 N. 16th, Fort Smith, SUNset 3-4803.

PATHOLOGY: E. Lloyd Wilbur, Baptist Hosp., Little Rock, FRanklin 4-3351.

ORTHOPEDICS: H. Elvin Shuffield, Donaghey Bldg., Little Rock, FRanklin 5-2446.

UROLOGY: Sam Jameson, 412 N. Washington, El Dorado, UNion 2-3411.

WOMAN'S AUXILIARY NEWS

Mrs. Louis Draeger of Danville was hostess August 9 to the Pope-Yell Medical Auxiliary. The meeting was held at the lodge on Mount Magazine. Mrs. Ernest King, President, presided over a brief business session, and with Mrs. Draeger and Mrs. Martin Heidgen reported on the recent state meeting at Little Rock. Seven members from Russellville and two members from Danville attended.

TUBERCULOSIS ABSTRACTS

A Review for Physicians

ISSUED MONTHLY BY THE NATIONAL TUBERCULOSIS ASSOCIATION

REPRODUCED FOR ARKANSAS PHYSICIANS BY THE ARKANSAS TUBERCULOSIS ASSOCIATION

"A CHRISTMAS SEAL SERVICE"

T B O N S K I D R O W

DONALD J. OTTENBERG, M. D.

Bulletin, National Tuberculosis Association, June, 1956

For many years the blackest spot on the map of tuberculosis morbidity and mortality in Philadelphia has been "skid row." In 1953-54 one of these census tracts had a tuberculosis mortality rate of 469 per 100,000 compared to a rate of 20.1 for the city as a whole. The reported active case rate was 1120.4 compared to 79.8 for the whole city.

Knowledge of such a startling tuberculosis problem stimulated the Philadelphia Tuberculosis and Health Association, with other voluntary agencies, to conduct organized X-ray surveys among skid row inhabitants as far back as 1952. The prevalence of serious tuberculosis was almost unbelievable, but relatively few homeless men would accept an X-ray. The most elaborate promotional schemes, ranging from individual "buttonholing" on the street to offering free Sunday dinners, could not overcome the evasiveness of skid row men.

The hope of reaching a larger number of these men in surroundings more conducive to cooperation led to the plan to X-ray the nightly yield of drunks, vagrants, and peace disturbers held for magistrate's court at a city police station. A proposal to conduct such a survey on a demonstration basis was laid before the chairman of the Committee on Public Health of the City Council, who enthusiastically carried the plan to the Mayor and the Police Department for approval.

Earlier experience with homeless men served to emphasize the importance of a well-organized survey procedure, with prompt and aggressive followup. In previous surveys between the time of the film taking and the time when results became available, a large number of the men had dropped out of sight. An address given by a person one day, if not incorrect to begin with, was likely to be of no value in locating that person a few days later.

A further complication was that one-night hotels do not permit the men to remain in the rooms during the day when public health nurses ordinarily would come to interview them. In the evening, when the men might be "at home," the nurses were not available to seek them out.

Facing such obstacles, the survey team put much effort into pre-survey consultations among staff members from the Police Department, the City Divisions of Tuberculosis Control and Public Health Nursing, the local health districts and the voluntary agencies.

A portable photofluorographic unit of the association was set up at the police station and the men who had been picked up by the police during the night were offered a chest X-ray at the time of discharge after a magistrate's hearing in the morning. With few exceptions, the men who had been in custody took the magistrate's offer more as an order than an invitation. Almost all

who were discharged during the period of the survey were X-rayed.

Films were developed on the day of exposure, except on week-ends, and were read the next morning before the regular work day of the city public health nurses. Positive reports were 'phoned to the health center in the appropriate district, enabling the nurses to visit the address of the person with suspicious findings the same day, which except on week-ends was the day after the film had been taken. Cases read as advanced active tuberculosis were reported directly to the Division of Tuberculosis Control so that hospital beds could be made available immediately.

Persons not located by the public health nurses during the day were reported at the end of the day to two male investigators who continued the search at night.

In the six-week period 1,750 persons were X-rayed. Tuberculosis was read in 151 films, or 8.6 per cent. Among the 151 films read "tuberculosis" were 37 labelled active from the film appearance alone. This diagnosis was confirmed in the clinic in 20 of the 37. Another diagnosis was reported for 6, while no reports were available on the remaining 11. Twelve additional active cases were diagnosed among persons whose survey films had been read "tuberculosis of indeterminate activity," giving 32 proved active cases altogether, a rate of 18 per 1,000. Twenty-two of the 32 had not previously been known to the Health Department, and at least half of the 10 previously known were not under supervision at the time of the survey.

It seems likely that there was more active tuberculosis in the group than the rate indicates, since no follow-up diagnoses were available on 30 per cent of those whose films were read "probably active" and 58 per cent of those read "activity indeterminate." The yield of active disease is at least 18 times greater than one would expect in the population at large and is in general agreement with reports from other metropolitan areas.

Although 136 cases read tuberculosis were referred for further study, 63 or 46 per cent failed to appear and 47 of these 63 men could not be located. Within 24 hours they had returned to the anonymity of skid row. Apparently they were devoid of any permanent ties that might help to trace them from one day to the next.

The survey resulted in hospital treatment for

11 men and brought or returned 50 others to clinic supervision. This more than justified the expenditure of money and effort. At the same time the results pointed up the peculiar problems presented by a skid row population and the need for special techniques, particularly in follow-up.

Those who have thought of homeless men as vagabonds who use skid row only as a temporary stopping place were surprised to discover that 30 per cent of the men were born in Philadelphia and 78 per cent consider Philadelphia as a place of permanent residence. Of those who listed Philadelphia as their permanent home, 97 per cent had been in the city over six months and three out of four had been there over 10 years.

It is clear that the skid row problem goes beyond the consequences of any one disease, even such a serious disease as tuberculosis. Skid row exists because the men on it are incapable of making an adequate life adjustment. They are properly to be considered among the mentally or emotionally ill. Alcoholism touches most of them, although no categorical answer can be given to the question whether the men are homeless because they drink or drink because they are homeless.

There is no easy solution to the problem, and some authorities believe it is impossible to control tuberculosis on skid row without controlling skid row itself. Some of the new ideas under consideration in Philadelphia are a separate alcoholic's court with an associated center for treatment and rehabilitation, municipal public shelters to replace flop houses, certification of lodging houses, and tuberculosis hostels to supply after-sanatorium lodging for homeless men.

One of the greatest needs is to understand the men on skid row better than we do. It is surprising how little we know about the psychogenesis of skid row personality and the social forces that tend to perpetuate it. The need to study the problem in a systematic way is urgent.

In the meantime, case-finding surveys in police stations, prisons, alcoholic rehabilitation centers and the like will give the richest yield of new significant cases of tuberculosis. While such programs inevitably meet frustrations and neither rid our large cities of skid rows nor skid rows of tuberculosis, they undoubtedly reduce the pool of infected persons and thereby help to control tuberculosis in our cities.

A RESEARCH MILESTONE

Nilevar*

(BRAND OF NORETHANDROLONE)

Searle's New and Practical Steroid Specifically for Protein Anabolism—

It has long been recognized that a substance which would promote protein anabolism would be of inestimable value in therapy. The androgens have this property, but unfortunately they also exert actions on secondary sex characteristics. These effects are commonly undesirable in therapeutic programs.

THE FIRST STEROID WITH ANABOLIC SPECIFICITY—Nilevar, the newest Searle Research development, therefore, meets a long desired clinical need because Nilevar presents the first steroid primarily anabolic for protein synthesis. Moreover, Nilevar is without prominent androgenic effects (only about one-sixteenth of that exerted by the androgens).

OBJECTIVE AND SUBJECTIVE RESPONSE—Orally effective, Nilevar therapy is characterized by retention of nitrogen, potassium, phosphorus and other electrolytes in ratios indicative of protein anabolism. Moreover, subjectively the patient observes an increase in appetite and sense of well-being.

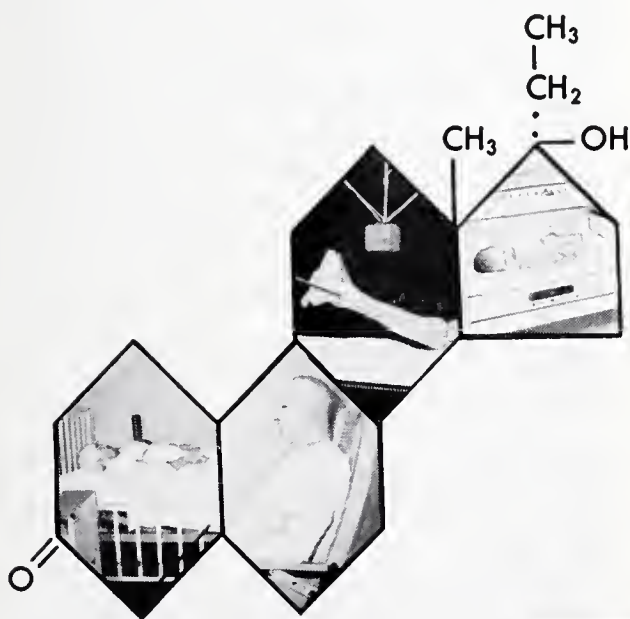
WELL TOLERATED—Nilevar has an extremely low toxicity. Laboratory animals fail to show toxic effects after six months of continuous administration of high dosages. Nilevar should not be administered to patients with prostatic carcinoma. Nausea or edema may be encountered infrequently. Slight androgenicity may be evidenced on high dosage or in particularly responsive individuals.

MAJOR INDICATIONS—Preparation for and recovery from surgery; supportive treatment of serious illnesses (pneumonia, poliomyelitis, carcinomatosis, tuberculosis); recovery from severe trauma and burns; decubitus ulcers; care of premature infants.

DOSAGE—The daily *adult* dose is three to five Nilevar tablets (30 to 50 mg.) but up to 100 mg. may be administered. For *children* the average daily dose is 1 to 1.5 mg. per kilogram of body weight; individual dosages depend on need and response to therapy.

SUPPLY—Nilevar is available in uncoated, unscored tablets of 10 mg. G. D. Searle & Co., Research in the Service of Medicine.

*Trademark of G. D. Searle & Co.



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*Griffith, G. C.; Dimitroff, S. P., and Thorner, M. C.: Ann. Int. Med. 45:7, 1956.

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TEACHING SEMINAR FROM THE UNIVERSITY OF ARKANSAS SCHOOL OF MEDICINE

PATHOPHYSIOLOGY AND THERAPY OF UNCOMPLICATED PEPTIC ULCER*

KERRISON JUNIPER, JR., M.D.

The subject of peptic ulceration is too extensive to be covered in a single conference. Today we wish to consider the mechanisms controlling gastric secretion and the medical therapy of uncomplicated peptic ulcer. A brief review of the known pathophysiology of peptic ulceration will serve as a basis for our therapeutic approach.

Composition of Gastric Secretions¹⁻³

The chief secretory products of the adult stomach are hydrochloric acid, pepsin and mucin. Hydrochloric acid is formed by the parietal cell. Although theoretically hydrochloric acid should be secreted with a hydrogen ion concentration of 159 mEq./L. and a pH of 0.83, actual measurements have not shown a hydrogen ion concentration above 150 mEq./L. or a pH much below 1.0. Pepsin is secreted by the chief cell in the form of an inactive precursor, pepsinogen. Pepsinogen is activated by acid at pH ranges below 6, with optimum activity at pH 2. Significant peptic activity does not occur until the pH approaches 3.5 or lower.

The hydrogen ion concentration of the entire gastric content is determined not only by the amount of hydrochloric acid secreted by the parietal cells, but also by the buffering capacity of the non-parietal cell secretions pepsin and mucin. The combined secretions of the chief cells and mucin-producing cells contain relatively large amounts of sodium and chloride, lesser amounts of bicarbonate and smaller amounts of potassium and calcium. The average gastric content may contain 20-80 mEq. of sodium, 5-20 mEq. of potassium and 100-150 mEq. of chloride per liter.

Frequent reference is made to "free" hydrochloric acid in speaking of acid production in peptic ulcer. Free HCl is that portion of the gastric HCl which has not combined with the buffers present in the stomach content. Such buffers include mucin as well as the electrolytes. Only this "free" HCl is capable of lowering the pH of the gastric content sufficiently to activate pepsinogen. Topfer's solution, an indicator with an end-point at pH 3.5, is used to determine the presence or absence of free HCl. Our present concept of acid formation is one of secretion of HCl by the parietal cell at a fixed concentration. Therefore the presence or absence of free HCl depends not on the production of acid by the parietal cell at a lower concentration, but rather on the relative amounts of acid and buffering substances produced by the gastric mucosa.

Phases of Gastric Secretion^{1-2, 4-10}

For a consideration of the various factors concerned in the control of gastric secretion, the stomach and duodenum should be divided into 3 functioning physiological units: the fundus and body of the stomach, the gastric antrum and the duodenum (Figure 1). The fundus and body of the stomach are the chief sites of pepsin and acid formation. The gastric antrum and the duodenum function as separate regulatory units, each having an independent means of regulating secretion in the stomach proper.

There are 3 phases of gastric secretion in response to a meal stimulus: cephalic, gastric and intestinal. These pathways are shown in figure 1. The **cephalic phase**, induced by the anticipation of and act of ingestion of food, is transmitted from cortical and hypothalamic centers of the

*From the Department of Medicine, University of Arkansas Medical Center, Little Rock, Arkansas.

brain over the vagi (pathway 1) and is of short duration. The **gastric phase** is initiated when food comes in contact with and distends the gastric antrum, resulting in the formation of gastrin by the antral mucosa. The gastrin so formed is a humoral substance which reaches the body of the stomach through the blood stream and continues the stimulus for gastric secretion (pathway 2). The **intestinal phase** is induced by humoral substances formed in the duodenal mucosa when food enters the duodenum (pathway 3).

There are counterpart inhibitory mechanisms which reduce gastric secretion when the stomach becomes empty. Stimulation of the **sympathetic**

nervous system (pathway 4) inhibits the vagi. An **increase in the hydrogen ion concentration in the gastric antrum**, the result of the loss of the buffering effect of food in the antrum as the stomach empties, blocks the formation of gastrin (pathway 5). In similar fashion an **increase in the hydrogen ion concentration in the duodenum** blocks (pathway 6) the formation of humoral stimulatory substances by the duodenal mucosa and also blocks antral gastrin formation. In addition, the presence of neutral fats and hypertonic solutions in the duodenum causes the formation of enterogastrone by the duodenal mucosa. **Enterogastrone** is a humoral substance which inhibits gastric secretion and motility (pathway 7).

MECHANISMS OF GASTRIC SECRETIONS

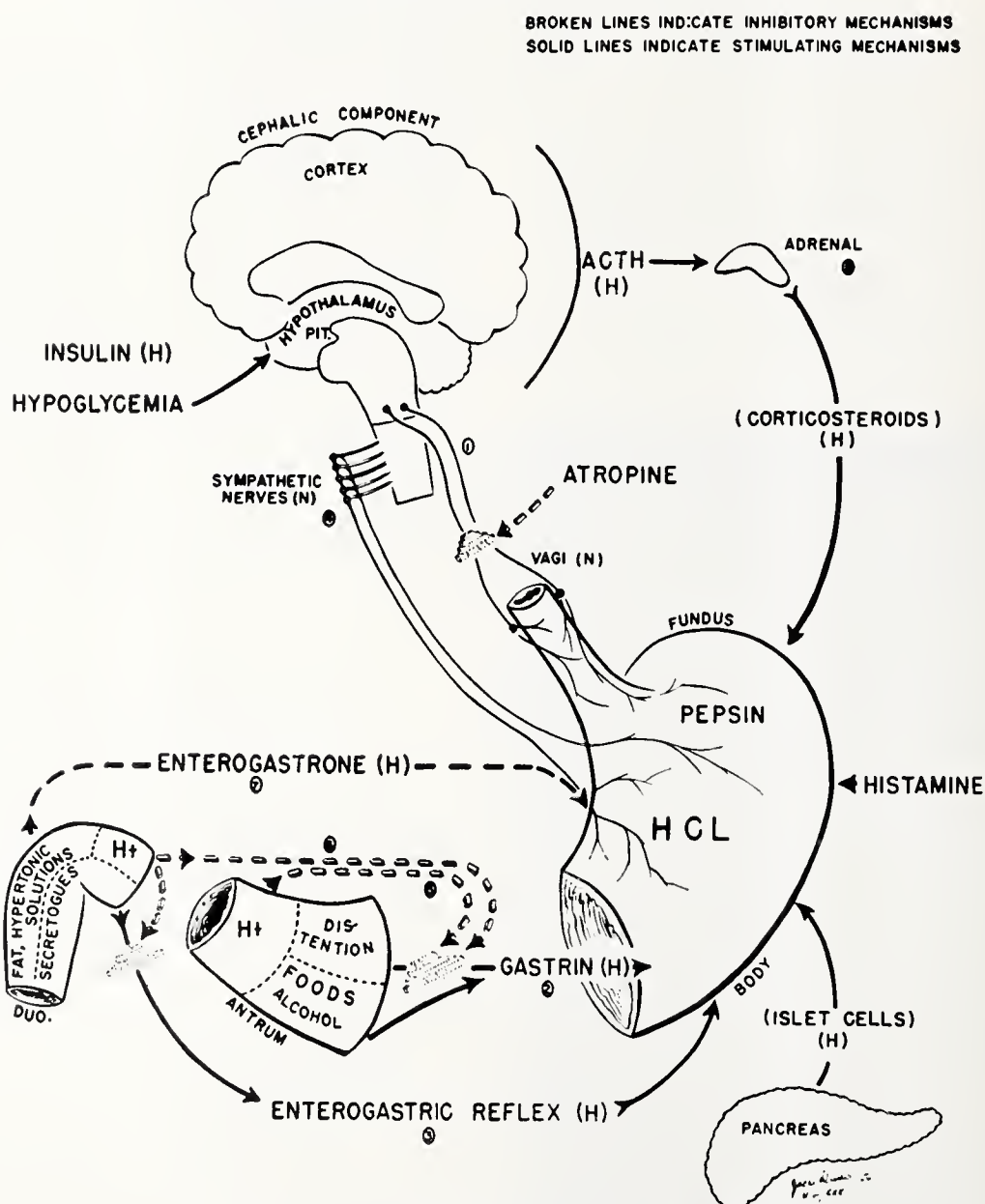


Figure 1. The various known pathways which influence secretion of hydrochloric acid and pepsin by the stomach. Pathways 1-3 and 8 stimulate gastric secretion while pathways 4-7 inhibit gastric secretion.

Pathogenesis of Peptic Ulceration^{1, 6-16}

Although the actual mechanisms of peptic ulceration are poorly understood, there are a number of factors which may be involved: increased peptic activity, lowered mucosal resistance, altered mucin production and loss of buffering capacity of biliary and pancreatic secretions. Altered resistance of the mucosa (possibly the result of impaired vascular supply), reduced protection of the mucosa by production of an abnormal mucin and alterations in the pancreatic and biliary secretions are factors which have not been subjected to much study. At the present time increased peptic activity appears to be the most important factor in prevention of healing, if not in the initiation of peptic ulceration. Peptic activity requires not only the presence of pepsin but also an acid concentration sufficiently high to activate pepsin. Hydrochloric acid alone will not produce peptic ulceration. Little information is available concerning the amount and quality of pepsin produced in normal and abnormal states, but pepsin production generally appears to parallel hydrochloric acid formation in quantity. For this reason we expect hypersecretors of acid also to be hypersecretors of pepsin.

If parietal cells secrete hydrochloric acid at a fixed concentration, hypersecretion of acid can be explained only by presence of a more prolonged and more powerful stimulus for acid secretion or by the presence of an abnormally large number of parietal cells in the stomach. No one can doubt the influence of emotional stimuli on secretion. Recent studies have suggested the presence of increased numbers of parietal cells in patients with peptic ulcer. While patients with duodenal ulcers usually are hypersecretors of HCl, patients with only gastric ulcers are either normo- or hypo-secretors of acid. The reason for this difference is unknown but this difference suggests that the mechanism of ulcer formation in the stomach may be quite different from that in the duodenum.

Therapy of Uncomplicated Peptic Ulcer^{1, 17-28}

Present day medical therapy of peptic ulcer is directed toward control of the peptic factor. There are two avenues of approach to the problem, 1) neutralization of acid formed in the stomach and 2) sedation and autonomic system blockade to reduce the stimuli for acid secretion. Neutralization is the most valuable single therapeutic procedure. Since significant peptic activity occurs only with a pH below 3.5, ideally one should maintain the pH of the gastric content above this

level. Actually it is very difficult, if not impossible, to maintain the pH of the gastric content much above 2 for any period of time. However, partial and intermittent neutralization of acid appears to be sufficient to alter the course of peptic ulceration and permit healing.

Foods, especially milk, have buffering properties but are not as efficient buffers, gram-per-gram, as the inorganic antacids. The most commonly used antacids are sodium, calcium, magnesium, aluminum and bismuth in the form of bicarbonate, carbonate, hydroxide, trisilicate or phosphate. The laxative or constipating effect of an antacid mixture is regulated by varying the proportions of the component compounds. Increasing the amount of aluminum hydroxide or calcium and bismuth carbonate tends to cause constipation, while increasing the amount of magnesium hydroxide or carbonate has a laxative effect. The constipating effect of any liquid antacid, such as amphojel, can be corrected by the addition of magnesium hydroxide (milk of magnesia). Usually a 2:1 ratio of amphojel to milk of magnesia will suffice to correct the constipation, but occasionally a 1:1 mixture will be needed.

The choice of an antacid preparation primarily is one of personal preference and convenience since most proprietary preparations have adequate neutralizing properties. There is considerable variation in palatability of the various preparations. While the liquid antacids are more rapid in action and more easily adjusted to avoid constipation, some patients prefer the convenience and taste of tablets. Antacids in the form of powders are the least expensive. Some caution is necessary in using antacids containing large amounts of aluminum hydroxide because of the possibility of depleting the body phosphate. However, use of alternate milk feedings will supply sufficient phosphate to prevent its depletion. Magnesium hydroxide should not be used in patients with impaired renal function because of possible accumulation of magnesium within the body and resultant CNS toxic effects. Ion exchange resins have been used successfully as antacids but most patients find these preparations unpleasant to take.

At the present time there are two practical methods of blocking acid formation. One can use sedatives to allay emotional tension and one can use anticholinergic agents to block autonomic stimuli to the stomach. Phenobarbital remains the sedative of choice in peptic ulcer since the tranquilizing drugs appear to result in more serious

toxic reactions and may actually stimulate gastric secretion. Sedatives should be used cautiously in patients engaged in hazardous occupations.

Anticholinergic agents in adequate dosage will reduce or abolish vagally-induced gastric secretion. However, they do not prevent gastric secretion induced by most humoral mechanisms. Choice of an anticholinergic agent is difficult because of the claims of various drug houses for their preparations. While there is no doubt that most of the well known synthetic anticholinergic agents have a powerful effect on the stomach, the crux of the matter lies in whether or not the synthetic agents are particularly more effective than the cheaper naturally-occurring drugs atropine and belladonna. The latter drugs are just as effective as the synthetic agents if used in adequate dosage. Therefore the main argument for using the more expensive synthetic drugs has been less side effects. The evidence for the effectiveness in patients of the synthetic anticholinergic agents in the absence of some dryness of the mouth is questionable. Certainly, therefore, if cost is a factor in individual patient care, there is little justification for use of the more expensive synthetic anticholinergic in patients with uncomplicated peptic ulcer.

For maximum effect anticholinergics should be given in sufficient dosage to cause mild dryness of the mouth. Since the dose required will vary from patient to patient, the physician should not become accustomed to using the same dose for each patient. Usually the dose will vary proportionally with the weight of the individual, very large males occasionally requiring as much as 24 drops of tincture of belladonna. Anticholinergics should be used 4 times a day, after meals and at bedtime. While the custom has been to give the drug before meals, there is little justification for such timing of the dose. The effect of the anticholinergic is most desired at the time when the stomach is becoming empty, 1 to 3 hours after the meal. Administration of the drug either with or after the meal provides such timing of maximum action. In addition, slower absorption of the drug permits use of a larger dose without more side effects but with a more prolonged effect. The bedtime dose of anticholinergic is quite helpful in controlling nocturnal symptoms, especially if this dose is larger than that tolerated during the waking hours.

The prime objective in peptic ulcer therapy is frequent intake of either food or antacid. If food is to be used as a neutralizing substance, the phy-

sician should make sure that the food has some neutralizing properties. Soft drinks, tea and coffee are commonly taken at snack times and do not provide adequate neutralization. Milk is the food most commonly used for neutralization. Use of nothing but milk and cream alternating with an antacid usually is not necessary and may not be desirable in management of uncomplicated peptic ulcer. Such a regimen occasionally results in excessive weight gain and can cause an iron deficiency anemia if used for prolonged periods. In addition, most patients do not like this diet. There is no evidence that the more solid foods either prevent healing of the ulcer or cause bleeding. The most beneficial part of the Sippy regimen is the regular and frequent intake of neutralizing substances. This portion of the regimen can be utilized by supplementing the regular 3 meals with bedtime and between meal feedings and with doses of antacid.

The particular regimen or schedule to be used will depend upon the physician's evaluation of the degree of difficulty which the patient is having and upon the physician's knowledge of the manner in which the patient responds to therapy. It is impossible to devise a single schedule which will fit the needs of all patients with peptic ulcer. The schedule must be individually tailored to fit the specific needs of each patient. It is essential that each patient be given a written schedule to follow. Verbal instructions are never adequate. A copy of the schedule should be placed in the patient's record for future reference.

In preparing a schedule for a patient the physician must decide the extent of the therapy—whether or not to require the maximum of treatment (bedrest, sedation, anticholinergics and intake of food or antacid every hour) or whether a more moderate schedule will suffice. Then the actual schedule is begun with an outline of the times the patient normally eats his meals and snacks.

7:00 a.m. **BREAKFAST**

10:00 a.m. Snack

12:00 Noon **LUNCH**

3:00 p.m. Snack

6:00 p.m. **SUPPER**

10:00 p.m. Bedtime snack

This outline is the basic schedule into which all other forms of therapy should be fitted. In addition, this is the minimum treatment any person should maintain for the rest of his life if he has ever had a peptic ulcer. By using the times the

patient normally eats his meals and snacks one will obtain a schedule which the patient will be willing to follow. It must be emphasized that the times given in these sample schedules are merely examples and not the actual times to be used.

When the ulcer patient is symptomatic additions will have to be made to the basic schedule. The following sample schedule will provide an example of the manner in which additions are made to the regimen.

7:00 a.m. **BREAKFAST**, dose of anticholinergic
8:30 a.m. Antacid
10:00 a.m. Snack (to include milk)
11:00 a.m. Antacid
12:00 Noon **LUNCH**, dose of anticholinergic
1:30 p.m. Antacid
3:00 p.m. Snack (to include milk)
4:30 p.m. Antacid
6:00 p.m. **SUPPER**, dose of anticholinergic
8:00 p.m. Antacid
10:00 p.m. Bedtime snack, anticholinergic
1:00 a.m. Set alarm clock, antacid at bedside

The maximum regimen will provide either food or antacid every hour during the waking hours and 2 or 3 times during the sleeping hours.

Since alcohol and caffeine are known to be effective stimulants for secretion of acid, their use is discouraged. However, the patient should be instructed that if he does use these substances he should always take them with a meal or with an antacid. Although there is little evidence that smoking increases gastric secretion, clinical experience suggests that use of tobacco also should be curtailed in similar fashion.

Most physicians are aware that the use of ACTH, cortisone, hydrocortisone, meticcorten and butazolidin is accompanied by an increased incidence of peptic ulceration. Often hemorrhage or perforation are the first signs of the development of an ulcer. The manner in which these substances act is shown in pathway 8 in Figure 1. Any patient on whom the above drugs are to be used should be questioned carefully for symptoms of prior peptic ulceration. In the presence of a history of prior peptic ulcer these drugs should not be used unless absolutely necessary. If they are used an upper GI series should be done prior to treatment and the patient should be placed on an ulcer regimen. All patients who are placed

on these drugs should have frequent stool examinations for occult blood.

Summary

Our knowledge concerning the mechanisms of gastric secretion and the pathogenesis of peptic ulceration still are incomplete. At the present time our most useful means of medical therapy is frequent neutralization of the gastric content. Sedatives and anticholinergic agents are helpful adjuvants to neutralization. A schedule should be prepared for each peptic ulcer patient if one is to obtain maximum patient cooperation. The use of tranquilizing drugs and corticosteroids should be tempered by knowledge of their possible harmful effect.

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PERIPHERAL ARTERIAL INSUFFICIENCY: OLD AND RECENT ADVANCES IN SURGICAL THERAPY

FRANK M. BAUER, M.D., Little Rock, Arkansas

The limited scope of this article precludes any lengthy discussion of the conservative and medical management of arterial insufficiency of the lower extremity. It must be stated, however, that any surgical attack on peripheral arterial insufficiency is doomed to failure, if the surgeon has not adequately armed himself with facts concerning the medical care of these patients. It was only in recent years that the patient suffering chronic arterial occlusive disease of the lower extremity could look forward to improvement in the distressing leg symptoms, and deferment of radical and early amputations. This has been made possible by outstanding recent advances in vascular surgery and improvement in the selection of candidates for regional sympathectomy.

The principal factors producing chronic arterial insufficiency of the lower extremities are those of vaso-occlusion and associated vasospasm. Since arteriosclerosis obliterans and thromboangiitis

obliterans comprise the majority of these cases, the discussion will be limited to the surgical treatment of these two peripheral vascular diseases.

Classically arteriosclerosis obliterans is a progressive, and degenerative arteriopathy occurring in the later decades, but not to exclusion of isolated instances in the early and late forties. Fortunately the eventual occlusive process of this disease shows a predilection for isolated and segmental areas chiefly in the terminal aorta, the iliac arteries, the common femoral artery, and in the lower third of the superficial femoral artery.

Since the aforesaid occlusion is usually segmental in nature, it is now possible in selected cases to surgically reconstitute vessel integrity by bridging the arterial defect. The problem of segmental arterial occlusion was recognized many years ago by Leriche, but it was not until 1946, with the aid of anticoagulants, that the first chronic arterial occlusion was successfully treated. It was at

this time that dos Santos performed the first encouraging thromboendarterectomy. Subsequently thromboendarterectomy has been successful in a few instances involving the aorta, and the large tributaries of its bifurcation. The procedure has been abandoned for segmental occlusions in medium sized arteries of the lower extremity, in view of the high incidence of postoperative thrombosis. Surgical reconstitution of vessel continuity has now been successfully accomplished many times. Although the early results have been more than encouraging, the final prognosis will have to await evaluation. The bridging of these segmental blocks has been accomplished by the use of by-pass or "shunt" grafts. The graft materials that have been used to this time are prepared arterial homografts, autogenous vein grafts, and synthetic prosthesis.

As previously noted by-pass and shunting procedures are possible without jeopardizing the extremity. To my knowledge, the most successful attempts have been accomplished with the use of prepared human arteries. As a result of significant and repeated failures of thromboendarterectomy, reconstitution of diseased vessels was attempted by resection of the involved segment and insertion of a graft by means of an end to end anastomosis. This procedure resulted in a high incidence of loss of collateral circulation and stenosis at the anastomosis site, with a frequent disastrous consequence and loss of limb. There evolved the concept of a by-pass graft which left the disease segment intact, and did not alter the collateral channels.

The technic for inserting a by-pass graft requires the end to side type of anastomosis between the graft and its host vessel, in and of itself this is not a difficult procedure. The procedure has not been standardized; but, if certain refinements are adhered to in the technic, the eventual outcome may be assessed with greater peace of mind. Anesthesia of choice, when attacking a segmental block within the leg is a continuous epidural spinal block. This type of anesthesia reduces the incidence of hypotension and thrombosis associated with major general anesthesia, and permits the beneficial effect of sympathetic block to be continued for twenty-four to forty-eight hours following surgery. This type of anesthesia is beneficial in previously sympathectomized individuals and is indicated. The site of the segmental block should be predetermined by arteriography; in so doing additional information may be obtained in regard to collateral circulation, and evidence of reconstitution of the host

vessel below the block. The proximal and distal sites of anastomosis are exposed through separate skin incisions. The intervening skin and muscle bridge is tunneled to allow the graft to lay in Hunter's canal parallel to the host vessel. Every effort should be made to prevent constriction and kinking of the graft. The ends of the prepared graft are so fashioned that the anastomosis produced will be a funnel or cobra mouth type.¹ (See figure 1). The proximal anastomosis should be



Figure 1

carried out in the most pliable portion of the common femoral artery as is possible. An ellipse of the host artery is removed to insure the patency of the anastomosis. The anastomosis is carried out under regional heparinization using a continuous everting suture of 5-0 arterial silk. Hemostasis at the anastomosis site is best accomplished by gentle pressure. Occasionally an interrupted suture is indicated to complete hemostasis; this is best inserted when all tension has been removed from the suture line. If the anastomosis, and the tributaries below the segmental block have been adequate, peripheral pulses return immediately following completion of surgery.

A certain fraction of the by-pass grafts will thrombose postoperatively; however, a significant number remain open and therefore justify the procedure. The beneficial effects of increased arterial flow are manifested by improvement in intermittent claudication and rest pain, in some instances there has resulted the healing of ischemic ulcers of the lower legs, feet and toes.

The difficulty in procuring, preparing, and preserving human arteries has led others to seek a more plentiful source of graft material. The use of auto-vein grafts has been singularly unrewarding in view of the high incidence of thrombosis.

This increased thrombosis rate may be attributed to decreased arterial flow through the graft. The development of crimped, flexible nylon tubes by Dr. W. S. Edwards, has been extremely promising both experimentally and clinically.²

All too frequently the patient with severe chronic arterial occlusive disease is not a candidate for reconstructive vascular surgery. The contraindications for by-pass procedures are as follows: extensive involvement of other organs by degenerative arterial disease, extensive regional block with distal thrombosis, failure of reconstitution of the distal host vessel, and rapidly advancing gangrene and infection. Many of these patients, when properly selected, will receive benefits from a regional sympathetic ganglionectomy. The poor result in unselected cases stems from the fact that the degree and extent of collateral circulation had not been adequately established prior to surgery. Clinically, sympathectomy has improved the walking tolerance of patients when the only symptom is that of claudication. Unfortunately the majority of patients present themselves for treatment with advanced arterial insufficiency, ulceration, and gangrene. But in spite of the above circumstances, clinically approximately fifty percent of these patients will receive graded improvement from sympathectomy. If for no other reason, the procedure occasionally permits a below the knee amputation in preference to a supracondylar amputation.

Thromboangiitis obliterans, in opposition to arteriosclerosis obliterans, is an inflammatory obliterative disease involving medium sized or small arteries and veins predominately of the lower extremities of young and middle aged men. The lesion is segmental, and permanent with respect to occluding the vessel. The degree of ischemia and gangrene which accompanies the disease is directly proportional to the number of collateral channels present, and the severity of arteriolar spasm that exists. The ultimate prognosis for the preservation of a limb in this type of occlusive disease is far better than in the case of arterial insufficiency resulting from arteriosclerosis obliterans. The predominate factors which influence this prognosis lies in the fact that the disease occurs in young males whose regenerative or healing capacities are good; that the disease is episodal in nature, and that it tends to become self-limited with cessation of arterial and venous occlusions. The treatment is directed both surgically and medically to improvement of collateral circulation, and prevention of vaso-constriction and infection. Since the occluding lesions in-

volve small and medium sized arteries, the by-passing or bridging of these block by vascular grafts is not surgically feasible at this time. However, the production of permanent vaso-dilatation in those patients who have not progressed to extensive gangrene, or who only have evidence of minimal arterial involvement, has been successful in promoting increased blood flow to the involved extremity. Regional sympathectomy is the procedure of choice for permanent vasodilatation. Early amputation should be avoided if possible. If ulceration and extreme pain prevent medical and surgical intervention, the area involved may be controlled by a peripheral denervation of that extremity.

Many patients have progressed to the point of severe rest pain, ulceration and gangrene as a result of thromboangiitis obliterans and arteriosclerosis obliterans by the time they consult medical help. The presence of pain is a major problem in the subsequent care of the patient; if uncontrolled, it frequently predicates failure of medical measures, and in the majority of instances increases the probability of a painful amputation stump. A rather simple procedure was developed some twenty years ago to relieve the suffering of these patients.³ It consists of interruption by crushing of the superficial and deep peroneal, and the posterior tibial nerves in the leg below the motor branches to the calf muscles. The motor



Figure 2

and sensory paralysis produced lasts three to six months, and is accompanied by a local sympathectomy effect. The insensitive foot then permits adequate medical and surgical care without any particular incapacitation of the patient from the temporary motor paralysis of the intrinsic muscles of the foot. This benign procedure accompanied by judicious medical and surgical care has enabled many surgeons to save numerous extremities, and reduce the number of major limb amputations.

Case I. T. V., a 62-year-old male, entered S. M. H. in November, 1955, because of intermittent claudication. Examination of the patient's lower extremities revealed absent palpable pulses below the femoral arteries bilaterally, and classical ischemic changes of the skin, hair, nails, and the musculature of the calves and feet. Arteriography (Figure 2), revealed bilateral segmental occlusions of the superficial femoral artery, with adequate reconstitution of the popliteal artery below the occlusion. The block was more extensive on the right than on the left. On November 22, 1955, under continuous epidural spinal anesthesia, a by-pass graft was inserted extending from the common femoral artery to the popliteal artery, (Figure 3). At the comple-



Figure 3

tion of the operation a palpable dorsalis pedis pulse was obtained. The graft remained patent, and on the twenty-first post operative day a high lumbar sympathectomy was carried out on the left side. The sympathectomy was carried out on the left side in lieu of an available graft. The result of the sympathectomy was satisfactory. Eight months following the by-pass operation examination of the patient revealed marked improvement in his walking tolerance, a palpable right dorsalis pedis pulse, and a warm left foot.

Case II. W. S., a 64-year-old male, entered S. M. H. in October, 1955, complaining of progressive claudication and rest pain in his right leg. Two years prior to this admission the patient was seen in this hospital for marked ischemia, rubor, and rest pain in the left leg. Several areas on the dorsum of the foot suggested pregangrenous changes. Empirically a high lumbar sympathectomy was carried out on the left; the result was most encouraging. Subsequently the ischemic ulcers cleared, and the claudication in the left leg improved. Because of increasing symptomatology in the right leg the patient was readmitted to the hospital for evaluation. Aortography (Figure 4), revealed a complete block of



Figure 4

the left common iliac artery, segmental narrowing of the right iliac artery, and complete occlusion of the femoral artery below the profundus femoris on the right. At this time, skin temperature studies and plethysmagraphic findings indicated that adequate collateral circulation was present, thus we were able with some assurance to predict a satisfactory result from a lumbar sympathectomy. On October 22, 1955, under general anesthesia a high lumbar sympathectomy was carried out on the right side. The post-operative course was uneventful and the patient returned to work. On subsequent follow up checks it was obvious that the patient had again

received benefit from a regional sympathectomy. Sympathectomy was the procedure of choice in this patient since the extent of occlusive process did not lend itself to a by-pass graft operation.

Conclusion

There can be no doubt that the treatment of obliterative vascular disease is far more encouraging today than ten to fifteen years ago. The advent of vascular reconstructive surgery, sympathectomy in carefully selected cases, antibiotics, minor amputations, proper hygiene, and intensive medical care have in combination reduced the number of major amputations. The shunt graft and other vascular substitutions are

not the final answer to this problem of arterial insufficiency, but they are an important step in the rehabilitation of patients with obliterative vascular disease.

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ADVANCES IN DERMATOLOGY

By LAWRENCE M. ZELL, M.D.

Some significant therapeutic advances have been made in dermatology which have not received widespread publicity in the general medical literature.

1. Use of Podophyllum in Senile Keratoses: In the southern United States, fair, blue-eyed individuals are very prone to develop senile keratoses from years of excessive exposure to sunshine. Approximately half of these individuals will achieve a marked to complete involution of the lesions on a prolonged daily administration of 100,000 units of Vitamin A. Isolated lesions which do not respond to Vitamin A are commonly destroyed by electrodesiccation or with liquid nitrogen.

Large areas over which senile keratoses have become confluent present a special problem. The large size of the area is often a deterrent to the use of electrodesiccation or liquid nitrogen. It is in these cases that Podophyllum is of special value.

Case 1. Mrs. O. T., white, blue-eyed widow, age 57, had worked outdoors for the past 20 years. Her forearms, dorsum of her hands, face and lower legs were extensively involved by senile keratoses. The lesions had become confluent from the elbows to fingers (Figure 1). The area involved was too extensive for any of the common methods of treatment.

20 Percent Resin of Podophyllum in Tincture of Benzoin was painted over the entire area and covered. Each day the Podophyllum was removed with alcohol and the procedure repeated. After four applications the arm was dressed using an antibiotic ointment. In ten days the forearm had completely epithelialized and Figure 2 shows the result five weeks after treatment.

Podophyllum is very selective in its action and produces no scarring. The linear scar visible in Figure 2 is the site of an excision of a squamous cell carcinoma three years previously.

The patient must be warned not to transfer any Podophyllum to the eye as a minute amount will cause a severe conjunctivitis.



Figure 1



Figure 2

2. Dermal Abrasion: The cosmetic improvement of acne scarring that can be achieved with dermal abrasion has been well publicized. There are uses of dermal abrasion that are not as well known. Dermal abrasion is not only of benefit in the scarring of acne but is of equal value in selected cases of scarring from lacerations and accidental tatooing.

Benign nevi on the face can be removed with a dermal punch and the defect replaced with a graft taken with the same sized punch. After six weeks the graft and adjacent margin are abraded. After the area is epithelialized the site of the graft is rarely detectable.

3. Chemosurgery: In 1941 Mohs described a microscopically controlled method of eradicating skin cancer by utilizing the property of zinc chloride to kill tissue without destroying its histological features.

Briefly, the method which Mohs called chemosurgery consists of the application of a thin layer of zinc chloride paste on the lesion. Twenty-four hours later the fixed tissue is painlessly cut away with a scalpel. No anesthesia is used. The plane of excision is just within the bloodless fixed tissue and provides a sheet of tissue about 2 mm. in thickness.

The specimen of tissue is cut into squares of 1 cm. and a stained frozen section made of each square. The microscopic findings of each section are mapped in an enlarged outline of the lesion on paper. With this map as a reference, the paste is reapplied to those areas which are not cancer free and this procedure is repeated daily until all sections are free of cancer.

Case 2. Mrs. W. H. T., white, age 49 had a basal cell carcinoma on the left side of the neck excised in 1948. The lesion recurred within a

year and was treated with radium. Six years ago the patient noticed a second recurrence but sought no further treatment since two previous attempts at eradication had failed.

When first seen Mrs. W. H. T. presented a basal cell carcinoma of the left side of the neck as shown in Figure 3. The Mohs method of

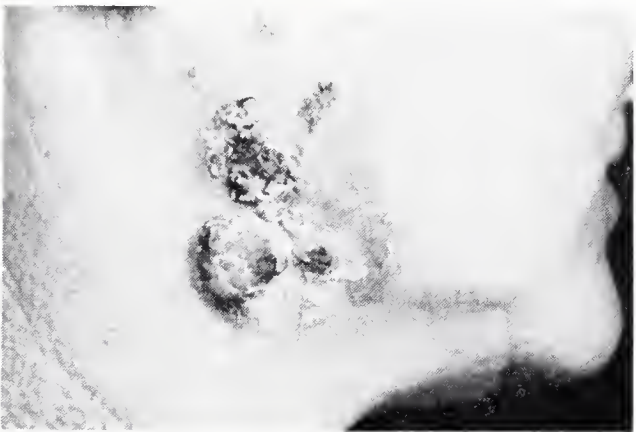


Figure 3

chemosurgery was carried out for six successive days. When the microscopic sections were free of cancer the cartilage of the lower pinna had been uncovered and saliva was exuding into the wound from the parotid and submaxillary glands. Figure 4 shows the wound two days after treat-

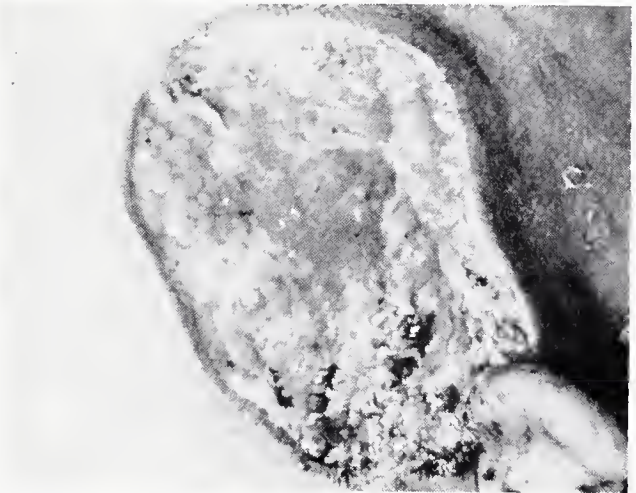


Figure 4

ment. No attempt was made to close the wound and no skin grafting was done. The wound was completely epithelialized in five weeks.

In two years of observation there has been no further treatment and there is no evidence of recurrence. Figure 5 is a recent photograph.

In recurrent basal cell carcinoma following conventional treatment, chemosurgery is often the





ACHROMYCIN*

Tetraacycline Lederle

for prophylaxis and treatment of

obstetric infections

Posner and his colleagues¹ have reported on the use of tetraacycline (ACHROMYCIN) in 96 cases of obstetric complications, including unsterile delivery, premature rupture of the membranes, endometritis, parametritis, and other conditions. They conclude that this antibiotic is ideally suited for these uses.

Other investigators have shown ACHROMYCIN to be equally useful in surgery and gynecology and virtually every other field of medicine. This outstanding antibiotic is effective against a wide variety of infections. It diffuses and penetrates rapidly to provide prompt control of infection. Side effects, if any, are negligible.


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ACHROMYCIN with STRESS FORMULA VITAMINS. Attacks the infection, bolsters the patient's natural defenses, thereby speeds recovery. Especially useful in severe or prolonged illness. Stress formula as suggested by the National Research Council.

SF Capsules, 250 mg.

SF Oral Suspension, 125 mg. per teaspoonful (5 cc.)

 For more rapid and complete absorption. Offered only by Lederle!

¹Posner, A. C., *et al.*; Further Observations on the Use of Tetraacycline Hydrochloride in Prophylaxis and Treatment of Obstetric Infections, *Antibiotics Annual* 1954-55, pp. 594-598.



LEDERLE LABORATORIES DIVISION
AMERICAN CYANAMID COMPANY
PEARL RIVER, NEW YORK

*REG. U.S. PAT. OFF.

PHOTO DATA: SPEED GRAPHIC CAMERA,
F.16, 1/50 SEC., ROYAL PAN FILM



Figure 5

method of choice. In a series of 174 cases of basal cell carcinoma of which 30 percent were recurrent, Mohs achieved 100 percent cure. A minimum amount of normal tissue is destroyed. On the face this is often of great importance. Although the patient is ambulatory throughout the treatment, this advantage is offset by the daily visits they must make to the office.

The major disadvantage is that the method is time consuming. In the above case over 165 frozen sections were required. The steps of the procedure must be carefully done and the work is exacting and tedious.

Mohs, F. E.: Chemosurgery: A Microscopically Controlled Method of Cancer Excision, *Achr. Surg.*, 42:279-295 (Feb.) 1941.

Obituary

DR. CHARLES HUGHEN KIMBRO, aged 81, of Tillar died at his home September 2, 1956, following several years of ill health. Dr. Kimbro had practiced medicine for 53 years. He was born October 4, 1874, at Midway, Drew County. He attended schools at Midway, Monticello and Tyro. He then went to Monticello to study at Hineman University, a forerunner of Arkansas A. & M. College. He began teaching in 1898, the year he married Miss Willie Ira Cooper. Later he enrolled at the Arkansas Medical School in Little Rock and from there to Tulane University in New Orleans. He received his medical diploma in 1903. Dr. Kimbro practiced at Florence and Selma before going to Tillar in 1915. Dr. Kimbro had been president of the Tillar School Board, director of Citizens Bank of Tillar, member of the Tillar Baptist Church, and was a member of the

Southeast Arkansas Medical Society and the Arkansas Medical Society. Surviving are his wife; three sons, W. C. Kimbro, Homer Kimbro and Vance Kimbro; a daughter, Mrs. Ruth Gill; three sisters, Mrs. Anna Herrington, Mrs. Howard Moore and Miss Lillian Kimbro; two brothers, Exall Kimbro and Haywood Kimbro; and four grandchildren.

DR. JOHN PETERS, 80, practicing physician in Franklin county for many years, died Monday, July 30, at Turner Hospital. He had been in failing health for a long period. Dr. Peters was born July 28, 1876, in Gadston, Ala., and was a graduate of Tulane University School of Medicine. Survivors include his wife and one son, Garland Steel Peters of Atlanta, Georgia.

DR. H. A. STROUD, SR., prominent retired physician and surgeon, and civic leader for many years, died Monday, October 1, 1956, in Jonesboro. He was born in Jonesboro and lived there all of his life. He attended Jonesboro schools, was graduated from Peabody College at Nashville, Tenn., and received his medical degree from the University of Tennessee Medical School in Memphis in 1930. That year he began his practice in Jonesboro and that practice spanned a half century. Dr. Stroud was a Mason, Shriner, an active member of the First Christian Church and a charter member and past president of the Jonesboro Lions Club. He was past counselor of the Arkansas Medical Society, a member of the American Medical Association, the Southern Medical Association, the Arkansas Medical Society and the Craighead-Poinsett Medical Society. Surviving are three sons, Dr. E. J. Stroud, Dr. Paul Stroud, and H. A. Stroud, Jr., all of Jonesboro; one daughter, Mrs. John S. Finch of Corsicana, Texas, and two grandchildren.



★ Editorial ★

SOCIAL SECURITY FOR PHYSICIANS (Editorial)

ALFRED KAHN, JR., M.D.

All physicians need certain insurance protection. An important facet of this is the matter of old age retirement and survivor income. For many years now it has been debated whether it's desirable for physicians to have this coverage through Government Social Security. In a series of articles, the Journal of the American Medical Association, (Vol. 162, p. 231, 1956), has pointed out the fallacy of the Government Social Security Program that would be offered to physicians.

In one of the articles, the authors have pointed out the government program is not insurance. When you buy insurance, you get a contract setting forth the benefits, and the moneys collected as premiums have to be handled in accordance with certain prescribed regulations. The Social Security Program has collected moneys and then so-to-speak used the moneys in such a manner as to be unable to meet actuarially the benefit obligations that may arise.

Thus Social Security is a program which in the fair sense of the word is not insurance but a tax program. Because of the manner of handling the collected funds, this taxation may become inadequate to pay current benefits and it is inevitable that several things would result. First, future generations will have to pay for our old age benefits and/or secondly, the social security tax will have to be increased; the latter could be accomplished by an increase in tax rate or tax base.

Think of buying insurance at a set premium and then having your rate increased without your approval. If this occurred with private insurance, it is quite likely the insured would elect to drop the insurance. If private physicians become part of the social security tax program, it is unlikely that the physician would be permitted as an individual to stop paying this tax. As noted above, this would be particularly unpalatable if the tax rate or tax base were increased.

The Social Security benefits survivors under certain circumstances. For your survivors to get maximum benefits, you must have paid maximum social security taxes for eighteen months. If your widow remarries, she does not get further benefits until she reaches 65 years. A surviving child's

benefits stop if he marries or when he reaches 18 years. When a widow's youngest child reaches 18 years, benefits to her stop until she is 65 years. If you have no children your widow does not receive benefits until she reaches 65 years of age.

To obtain retirement benefits certain stipulations have to be met. You must be 65 years of age; statistically the younger you are (and the longer you will pay taxes) the less chance you have of surviving to 65 years; one out of every three 45-year-old physicians will fail to live to 65 years but a 60-year-old man has 85 percent chance of surviving to 65 years. Should you survive to 65 years, you must earn less than \$2,081.01 per year in order to collect benefits, but currently only one doctor in seven of the 65-75-year-age group is retired.

MEDICINE IN THE NEWS

WHO STUDIES EFFECTS OF RADIATION ON HUMAN HEREDITY

A World Health Organization study group has made a report on the effects of radiation on human genetics, as part of WHO's participation in the public health aspects of peaceful uses for atomic energy. The group was headed by Dr. Alexander Holland, director of the biology division, Oak Ridge National Laboratory. Pan American Sanitary Bureau, in making public portions of the report, stated: ". . . they found strong grounds for believing these genetic effects to be cumulative so that in the long run a small amount of radiation received by each of a large number of individuals could do an appreciable amount of damage to later generations."

GENERAL MEDICAL LEGISLATION

Laboratory Research Construction: Public Law 835, which authorizes a 3-year program of \$90 million in grants to medical schools, hospitals and other non-federal institutions for laboratory facilities doing health and medical research, was one of the major measures enacted by the 84th Congress. It passed the Senate in the final days of the first session but was held up for months this year in the House while bill managers pondered the addition of federal construction grants for medical schools. The medical school aid feature was dropped in favor of further study.

National Library of Medicine: Another milestone this session was the measure reconstituting

the Armed Forces Medical Library as the National Library of Medicine and placing it for administrative purposes in the Department of Health, Education, and Welfare. When a group of Congressmen pressed for location of the library in Chicago instead of the Washington (D. C.) area, it appeared the proposal would be stymied in committee. In a compromise, Congress voted to have the 17-man board of regents select a site. Public Law 941 was the result.

HEALTH INSURANCE COVERAGE IN U. S. AT ALL-TIME HIGH

Benefit payments designed to help people pay hospital and doctor bills are running 20 percent higher this year than last, the Health Insurance Council announced recently in issuing the findings of its tenth annual survey of the extent of voluntary health insurance coverage in the United States. As of July 31, 1956, the Council estimates that some 110 million persons were covered by hospital insurance; 94 million had surgical protection; 58 million had regular medical expense coverage, and seven million were insured against major hospital and medical expenses.

AMA TO CO-SPONSOR MEDICO-LEGAL FILMS

A series of films on medico-legal problems will be produced by the pharmaceutical firm of William S. Merrell Co. of Cincinnati in cooperation with the AMA's Law Department. The first film—dealing with the doctor as a medical expert witness—will be previewed next month (November) at the AMA's Clinical Session in Seattle. This film will be available for showings at state and county medical society.

THE MONTH IN WASHINGTON

Washington, D. C.—Regardless of which party organizes the next Congress or who occupies the White House, health and welfare legislation promises to take up considerable time and attention of lawmakers. There is nothing to indicate that the general subject of health has lost its appeal either to the public in general or to men who run for political office in particular.

The national platforms on which the candidates of both parties have been campaigning are somewhat of a blueprint for the type of legislation to come in the 85th Congress, convening next January 3; generally, both parties advocate more rather than less federal participation in health

and welfare programs. Here are some of the points in the two platforms:

Aid to Medical Schools—The Republicans recommend "federal assistance to help build facilities to train more physicians and scientists" as a supplement to action of the 84th Congress authorizing federal grants to schools and other groups for laboratory research facilities. The Democrats state: "We pledge ourselves to initiate programs of federal financial aid, without federal controls, for medical education."

Aid to Hospital Construction—The Republican plank: "Republican leadership has enlarged federal assistance for construction of hospitals." The Democratic plank: "We pledge continuing and increased support for hospital construction programs."

Medical Research—Republicans: "We have asked the largest increase in research funds ever sought in one year to intensify attacks on cancer, mental illness, heart diseases and other dread diseases." Democrats: "We shall continue to support vigorously all efforts, both public and private, to wage relentless war on diseases. . . . We commend the Democratic party for its leadership in obtaining greater Congressional authorizations in this field."

Vocational Rehabilitation—Republicans: "We have fully resolved to continue our steady gains in man's unending struggle against disease and disability." Democrats: "We pledge support to a vastly expanded rehabilitation program for these physically handicapped, including increased aid to states."

Medical Care—Republicans: "We have encouraged a notable expansion and improvement of voluntary health insurance, and urge that reinsurance and pooling arrangements be authorized to speed this progress." Democrats: "We pledge . . . increased federal aid to public health services, particularly in rural areas."

Social Security—Republicans: "We shall continue to seek extension and perfection of a sound social security system." Democrats: "By lowering the retirement age for women and for disabled persons, the Democratic 84th Congress pioneered two great advances in social security. . . . We shall continue our efforts to broaden and strengthen this program by increasing benefits to keep pace with improving standards of living, by raising the wage base upon which benefits depend and by increasing benefits for each year of covered employment."

Members of the American Academy of Pediatrics in Arkansas met on 9 September, 1956, and officially formed an Arkansas Chapter of the American Academy of Pediatrics. The officers elected were as follows:

Chairman: Dr. Vida Gordon, Little Rock.

Alternate Chairman: Dr. Joseph Rosenzweig, Hot Springs.

Secretary-Treasurer: Dr. Johan W. Eliot, North Little Rock.

Executive Committee: Dr. J. Schuler McKinney, El Dorado.

Program Committee Chairman: Dr. Robert L. Henry, Little Rock.

PLAN HAWAIIAN TRIP AFTER SEATTLE MEETING

Physicians and their wives planning to attend the A.M.A. Clinical Session in Seattle, November 27-30, are invited to take a Hawaiian vacation after the meeting.

New York, September 16—The Ford Foundation today announced grants totaling \$21,750,000 to strengthen instruction in the 44 privately-supported medical schools now in operation in the United States.

The grants are in the amount of \$500,000 to each of 43 four-year institutions and \$250,000 to the two-year medical school at Dartmouth College, Hanover, N. H. They were authorized by the Foundation's board of trustees upon the recommendations of a special advisory committee headed by Dr. Lee DuBridge, president of the California Institute of Technology.

NEW EFFORT STARTED FOR U. S. EMPLOYEE HEALTH INSURANCE

At the request of Congress, information is being gathered on the practicability and probable cost of a program of basic health insurance for U. S. civilian workers, financed partly through payroll deductions and partly through federal contributions. The survey is the outgrowth of hearings conducted last session by the House Post Office and Civil Service Committee on a proposal for major medical cost insurance, with the premium paid entirely by the U. S.

No legislation resulted from the hearings, after the plan was opposed by Blue Cross and Blue Shield, American Hospital Association and some spokesmen for labor. They maintained that the first step should be basic protection, handled

through payroll deductions. Most spokesmen for federal employee unions supported the catastrophic insurance proposal as the best thing obtainable at the time. Then the administration refused to indorse payroll deductions.

GOLDEN ANNIVERSARY CELEBRATION SOUTHERN MEDICAL ASSOCIATION

The President of the Tennessee State Medical Association, Dr. G. C. Savage, Nashville, in the summer of 1906, invited the presidents of the state societies of Alabama, Florida, Georgia, Louisiana and Mississippi to send representatives and join with representatives from Tennessee in a meeting in Chattanooga on October 2, 1906, to discuss the advisability of organizing a regional association. A group from these states assembled at The Read House in Chattanooga on Tuesday, October 2, 1906, effected a tentative organization, the name to be the Southern Medical Association, and named a Committee to draft a Constitution and By-Laws. The Committee worked that night, and the next forenoon, Wednesday, October 3, presented the draft which was adopted without change. And so the Southern Medical Association was born.

The Southern Medical Association will have a Golden Anniversary Celebration, a birthday party, in Chattanooga at The Read House, October 2-3, 1956, fifty years to the day from the time it was born. The program for the Celebration will be historical, informational and inspirational. The Celebration will begin with a dinner meeting on Tuesday evening and conclude with a session Wednesday forenoon.

Construction of Lee County's 28-bed hospital is almost within sight as most all preliminary obstacles have been overcome. A five-acre plot of land has been purchased as a hospital site. It is located on Highway 79 just in front of the Marianna Greenhouse. The architect's drawings have been sent to Dallas for final approval by the federal government.

Plans to nearly double the size of its hospital at Little Rock with a \$1,000,000 annex has been announced by the Missouri Pacific Employees Hospital Association. The new building will increase the hospital's capacity from 150 to 275 beds.

Arkansas Democrat, Little Rock, Arkansas, September 18, 1956: The Perry County Community Health Clinic will continue to be maintained from the Rockwin Fund established by Winthrop

Rockefeller for the experimental public health unit, but the University of Arkansas School of Medicine will maintain no active control over the project at this time. Dr. F. Douglas Lawrason, provost for medical affairs at the School of Medicine, said an agreement has been reached between Mr. Rockefeller and the medical school over the school's share in operation of the Perry county unit, but that the project "will be permitted to try to stabilize itself before expansion of present research there is undertaken."

National Fire Protection Association Pamphlets No. 56 and 565 have been revised. No. 56 deals with recommended safe practice for hospital operating rooms and 565 deals with standards for nonflammable medical gas systems. These are available at 60 Batterymarch Street, Boston, Mass.

AMA PREPARES LIST OF HEALTH FILM SOURCES

Medical society program and public relations chairmen will be especially interested in the booklet entitled, "A List of Sources of Films on the Subject of Health," recently prepared by the AMA's Council on Scientific Assembly. The list includes the sources of motion pictures on the subject of health which have come to the Council's attention. The booklet is arranged in three parts: (1) loan, rental and sales libraries; (2) state health department film libraries; (3) catalogs and special film lists. For complete listings of films, physicians should write directly to the sources listed. Copies of this booklet may be obtained from Motion Pictures and Medical Television, AMA.

ANNOUNCEMENTS and THINGS TO COME

The University of Texas M. D. Anderson Hospital and Tumor Institute will hold its Eleventh Annual Symposium on Fundamental Cancer Research, March 7, 8 and 9, 1957.

A course in practical electrocardiology will be presented December 3-7, 1956, in Houston, Texas, by Dr. Demetrio Sodi-Pallares, Chief of the Department of Electrocardiology at the National Institute of Cardiology, Mexico City, under auspices of The University of Texas Postgraduate School of Medicine and Baylor University College of Medicine.

The next Bahamas Medical Conference will be held in Nassau December 1-15, 1956.

The Chief Medical Officer of the Bahamas has again kindly offered the facilities of the new enlarged Princess Margaret Hospital and of other medical installations under his authority for clinical demonstrations and lectures.

AMERICAN BOARD OF OBSTETRICS AND GYNECOLOGY, INC.

Office of the Secretary—Robert L. Faulkner, M. D.
2105 Adelbert Road, Cleveland 6, Ohio

The next scheduled examinations (Part I), written, and review of case histories for all candidates will be held in various cities of the United States, Canada, and military centers outside the Continental United States, on Friday, February 1, 1957, at 2:00 P.M.

The American Geriatrics Society will give a Graduate Symposium on Geriatric Medicine at the Waldorf-Astoria, New York City, November 19 and 20, 1956.

Reports of experimental research on vaccines against viruses, including those associated with the common cold, will be presented before the 84th annual meeting of the American Public Health Association and meetings of 40 related organizations in Convention Hall, Atlantic City, New Jersey, November 12-16.

Anyone interested in presenting a scientific exhibit at the next annual meeting of the State Medical Society to be held in Little Rock, April 22-25, 1957, are urged to write to:

Lawrence M. Zell, M.D., 937 Donaghey Building, Little Rock, Arkansas.

LETTER TO EDITOR

Dr. A. Kahn
Sixth & Pulaski
Little Rock, Ark.

Dear Sir:

Re: Advisory Committee on Radiologic Installations

In response to frequent requests for authentic information concerning radiologic installations in hospitals, the Arkansas Radiological Society at its July, 1956, meeting appointed an Advisory Committee on Radiologic Installations.

The services of this committee will be available to any hospital in the state on written request. It is planned that the committee will answer inquiries or refer the inquiries to authoritative sources. Much of the work of the committee will be done by mail, but many inquiries will require a personal visit to the hospital.

The planning and equipping of an X-ray department is an expensive procedure, and too often no thought is given to the accelerated growth of X-ray service that will result when a full-time or part-time radiologic service can be arranged. It is expensive to remodel and to have to turn in small equipment when the load of work becomes heavy. A poorly planned and ill-equipped X-ray department cannot give adequate efficient service, regardless of the qualifications of a trained X-ray technician or an attendant Radiologist.

The Arkansas Radiological Society invites inquiries, directed to the Committee, 607 Donaghey Building, Little Rock.

Very truly yours,

E. A. Mendelsohn, M.D.
Secretary-Treasurer,
Arkansas Radiological Society.

Arkansas

TRAVELING

And Clipping Bits Here and There

From the New York State Journal of Medicine

It may happen that a doctor of medicine may be queried by representatives of media of public information about certain scientific subjects. If this occurs, what should the doctor do?

If the doctor happens to be an officially designated spokesman, there is no problem, but if not, should he comply with such requests? The answer is yes whenever he has accurate information to give. It should be remembered that many of the present executives of news media were reporters themselves in the past. In that capacity some at least may have had some difficulty in obtaining from a doctor the information the reporter was assigned to get. Perhaps his contact with the doctor resulted in a "brush-off," or a refusal not too diplomatically handled. This could have occurred in the past and doubtless did with some frequency. Now that same former reporter may

be an executive of his paper or magazine. He would be less than human if perhaps some memory of his reportorial days did not remain in his subconsciousness. Here could be a possible source, among others, for today's alleged occasional "bad press."

The "Guide for Cooperation" between the medical profession and the media of public information is published by the Medical Society of the State of New York for the express purpose of promoting better understanding. On this subject the "Guide" says:

"Doctors of Medicine, other than officially designated spokesmen, when approached by representatives of the press, radio, television, science or magazine writers for information relating to scientific subjects are urged to comply with such requests. In cases where premature release of scientific information is a concern, a frank discussion of the problem is suggested between the doctor and the press representative."

After all is said there are few problems that cannot be solved by the use of common sense, courtesy, and a strict adherence to the rules governing professional conduct.

Swiss physician, Pav P. Rentchnick in Secretary Lull's Newsletter states:

"After visiting this nine-story building on Dearborn street, one can only be shocked by the absence of political wisdom of organization and of dynamism of the physicians of Europe, whose negligence has already led to the nationalization of medicine in certain countries."

PERSONALS AND NEWS ITEMS

Dr. David O. Allen announces his association with Dr. Sam Jameson, El Dorado, for the practice of urology.

August 23 was declared "Dr. Taylor Day" by a proclamation by the mayor of Sparkman in honor of Dr. John Edwin Marvin Taylor. Dr. Taylor has been a practicing physician in Dallas county for 45 years. He was honored on that date when more than 3,000 persons gathered at Sparkman for a picnic at the school grounds.

A native of Monticello, Dr. William C. Whaley, Jr., of Johnson City, Texas, has moved to Warren and begun the general practice of medicine and surgery.

Dr. James M. Kolb, Clarksville, Arkansas delegate to the American Medical Society, attended a regional conference in Denver, Colorado, in August. The conference was concerning the program for medical care of dependent military personnel which will be effective December 8, 1956.

Dr. Sam G. Jameson, El Dorado, attended the meeting of the International College of Surgeons in Chicago, September 9-13, and at the invitation of Dr. Tracy O. Powell of Los Angeles, appeared on the program of the Urological Section, presenting a paper and film on Ureterocalyostomy.

Drs. Harley C. Darnall, Thomas P. Foltz, Evans Hornberger and J. F. Kelsey have moved their offices to 500 Lexington Avenue, Fort Smith. Dr. Robert L. Sherman will practice obstetrics and gynecology at the same address.

The Arkansas Baptist Hospital, Little Rock, has appointed Dr. S. L. Allen of Ford City, Pa., to the newly created post of chief anesthetist and operating room director.

Upon his discharge from the Air Force the latter part of November, Dr. Floyd F. Gregory will return to North Little Rock and open practice in the Sylvan Hills area of that city. He will be the first doctor to practice in Sylvan Hills.

Dr. T. J. Raney, Little Rock, has been appointed as Pulaski County health officer on a part-time basis.

It has been announced that Dr. Reuben L. Chrestman, Jr., of Helena has been elected to membership in the Arkansas Society of Obstetrics and Gynecology.

PROCEEDINGS OF SOCIETIES

The Craighead-Poinsett County Medical Society met September 5th at the Hotel Noble in Jonesboro. Dr. John Pierce, Professor of Medicine at the University of Arkansas School of Medicine, spoke on "Clinical Use of Pulmonary Function Test."

The Hot Springs, Garland County Medical Society in its meeting September 11th, voted unanimously to endorse the nomination of Dr. McCurry of Cash, Arkansas, as General Practitioner of the year.

The Ouachita County Medical Society met in dinner session Thursday evening, September 6th, at the Camden Hotel in Camden as the guests of Drs. J. I. Dedman and L. V. Ozment. Dr. Deane Wallace of Little Rock gave an illustrated lecture on "Common Gynecological Conditions."

The Southeast Arkansas Medical Society and Auxiliary met for their monthly dinner meeting at the Greystone Hotel, McGehee, Monday night, August 20th. Dr. Fred J. Gray of Little Rock was guest speaker for the doctors. After dinner the ladies adjourned to the hotel parlor for their auxiliary meeting. Mrs. Howard Rands of Dumas, Auxiliary president, presided over the business session. Mrs. Fred J. Gray of Little Rock and Mrs. Charles Anderson of Pine Bluff were guests. About 20 members attended the meeting. Their September meeting was held on Monday evening, the 17th. The program was presented by Dr. Guy Robinson of Dumas.

The Fifth District Medical Society met Thursday evening, October 4th, at the Camden Hotel, Camden, Arkansas, with Dr. L. V. Ozment, President, presiding. Dr. Raymond Cook of Little Rock and Mr. John L. Bach, Director, Press Relations, American Medical Association, Chicago, spoke. The meeting was well attended.

IN MEMORY OF DR. HOMER A. STROUD

It is not all to live and sad to die. To have lived worth while leaving our footprints on the sands of time, gives the earthly glory to have lived.

"He is not dead whose glorious mind lifts thine on High.

To live in hearts we leave behind is not to die."

Nothing is more estimable than a physician like Dr. Stroud who having studied nature from youth, knowing the properties of the human body, the diseases which assails it, the remedies that will benefit it, and exercises his art with caution and pays equal attention to the rich and the poor.

Dr. Stroud was one who strongly believed that he who treats the sick and wounded watcheth not alone, that there is three in the darkness together and the third is the Lord.

At this time we can bow our heads together in submissive reverence and brotherly devotion, and are reminded that unless we fulfill the demands of duty and honest efforts we fail in our life's efforts.

We sanctify this hour of bereavement. The valor of our deceased Brother, colleague and con-

frere should set an example for the whole profession to emulate.

All who were fortunate to have possessed his friendship, or to have been beneficiaries of his great goodness will feel a keen sense of bereavement as the result of the passing of this good man.

His passing intermingles grief, sadness and joy. We are grieved over the loss of a true and tried friend, saddened that our departed member is no longer able to council with his family, that they are deprived of his earthly love and assistance. That our Society has lost a most valuable member, and the different committees in which he served have lost his influence and services. But we rejoice to think of his great service, integrity and achievements. While alive he was a most valuable citizen adding much to life, living a life of service and a worthy member of our scientific body.

We also rejoice that the sting of death is lessened by the promise of God, through the redeeming blood of Christ.

Craighead-Poinsett Medical Society.

WOMAN'S AUXILIARY NEWS

15 September 1956

Mrs. Jessie Irvin, President, Sebastian County
Medical Assistants Society
1500 Dodson Avenue
Fort Smith, Arkansas

Dear Mrs. Irvin:

The attention of the Arkansas Medical Society has been called to the fine gesture your Society has made in behalf of Medical Education. So far as we know the Sebastian County Medical Assistants Society is the only such society to make a contribution to the American Medical Education Fund. Mr. Paul Schaefer, our alert Executive Secretary, noted your unprecedented gift.

May I pass on to you and your Society our thanks for being interested in and contributing to the A.M.E.F. It is encouraging to the Doctors to know that all people in medicine are indeed interested in seeing that our schools are maintained, and your generosity will act as a stimulant to our own giving.

Please convey these thoughts to your membership, and assure them of the gratitude of the Arkansas Medical Society.

Sincerely,

Fount Richardson, President,
Arkansas Medical Society.

Contributions were made during August, 1956, to the American Medical Education Foundation by the following auxiliaries:

WOMAN'S AUXILIARIES TO:

Arkansas County Medical Society.....	\$ 319.22
Boone County Medical Society.....	5.00
Bowie-Miller County Medical Society.....	26.00
Clark County Medical Society.....	45.00
Columbia County Medical Society.....	2.00
Craighead-Poinsett County Medical Society.....	25.00
Crittenden County Medical Society.....	10.00
Franklin County Medical Society.....	8.00
Garland County Medical Society.....	17.00
Greene-Clay County Medical Society.....	10.00
Hempstead County Medical Society.....	4.00
Jefferson County Medical Society.....	38.00
Johnson County Medical Society.....	5.00
Monroe County Medical Society.....	2.50
Phillips County Medical Society.....	40.00
Pulaski County Medical Society.....	1,064.37
Sebastian County Medical Society.....	55.00
Sevier County Medical Society.....	40.00
Union County Medical Society.....	10.00
Washington County Medical Society.....	8.00
Sebastian County Medical Assistants Society.....	10.00
	<hr/>
	\$1,744.09

Hot Spring County Medical Auxiliary and Society held its first joint meeting September 26, 1956, with Dr. Bill Orr of Little Rock as guest speaker. Members were entertained at dinner at the home of Dr. and Mrs. Bruce Kersh of Malvern.

Boone County Medical Auxiliary heard a program on "Civil Defense" given by Air Force Master Sgt. Robert H. Burneson, Air Force Representative for the Ground Observer Corps in Northwest Arkansas, at its September meeting. A movie on the advancements in electronic interception was a feature of the program. "Rural Health" was the subject of the October program in Boone County and was presented by Miss June Schwantes, who is presently associated with the Northwest Arkansas Gospel Mission at Hasty. Miss Schwantes, a graduate of Vanderbilt University and the West Suburban Hospital in Chicago, is a Registered Nurse. She has been active with the Board of Health in Chicago and during World War II served in the Nurse Corps of the United States Navy. She and Miss Marie Oleson, founder of the Gospel Mission at Hasty, work in the capacity of spiritual and medical advisers to the people of Newton County primarily, although they also serve Carroll, Searcy, and Boone Counties.

Mrs. C. C. Long of Ozark, State Program Chairman in the Auxiliary this year, presented the

program at the first meeting of Pope-Yell County Auxiliary. Mrs. Long discussed benefits to a community when program material is made available to other organizations in the community. Members of Pope-Yell Auxiliary are already busy with their Christmas project—the making of washable noiseless toys for the use of pediatric patients in the hospital. Mrs. Douglas Lowrey, Russellville, and Mrs. J. H. Scroggin of Ola were introduced as new members.

"Portrait of A Lady" was the theme of the tenth annual Benefit Style Show-Tea which the Jefferson County Medical Auxiliary sponsored in October at the Hotel Pines in Pine Bluff. The ballroom of the hotel was transformed into the interior of an art gallery, and on each side of the entrance was hung a large screen with portraits and paintings emphasizing the theme. Models made their entrance through a spotlighted doorway of the art gallery. Co-chairmen of the Benefit were Mrs. E. L. Hutchison and Mrs. J. Clyde Hart, Jr.

Dr. Howard Stern was guest speaker at the September meeting of Jefferson County Auxiliary, discussing new plans for Davis Hospital.

New members of Sebastian County Auxiliary who were introduced at the first meeting in October are: Mrs. Robert Sherman, Mrs. A. F. Hoge, Jr., Mrs. Elmer Purcell, Mrs. Boyd M. Saviers, Mrs. Walter Selakovich, Mrs. Gordon ReMine, Mrs. Robert Dale, and Mrs. William Moten. Wives of doctors stationed at Fort Chaffee were special

guests. Mrs. Hoyt Kirkpatrick was hostess for the meeting, which was a coffee at her home.

The schedule of district meetings for the Woman's Auxiliary to the Arkansas Medical Society is as follows: Northeast District at Jonesboro on October 11; Southeast District in Little Rock on October 17; Northwest District at Fort Smith on October 23; and Southwest District in Hot Springs on November 6. These meetings were conducted as workshops to help each member and officer get acquainted with auxiliary work as prepared by the committees, and served as an opportunity for the exchange of ideas which might prove helpful in Auxiliary work on both the local and state level.

Southern Medical Association will celebrate a Golden Anniversary in Washington, D. C., November 12-15, and Southern Auxiliary will hold its convention at the same time. The Mayflower Hotel will be headquarters for the meeting, and many social events, as well as scientific exhibits, are on the agenda. Mrs. L. Gardner, President of the Woman's Auxiliary to the Arkansas Medical Society, is publicity chairman of Southern Medical Auxiliary.

State officers and Committee chairmen and members were guests of the Pulaski County Medical Auxiliary October 17 at the regular monthly luncheon, following a meeting that morning of the Southeast District workshop, under the direction of Mrs. Gordon P. Oates. Tea room modeling entertained members and guests during the luncheon, and Mrs. L. Gardner, State Auxiliary President, was the luncheon speaker.

TUBERCULOSIS ABSTRACTS

A Review for Physicians

ISSUED MONTHLY BY THE NATIONAL TUBERCULOSIS ASSOCIATION

REPRODUCED FOR ARKANSAS PHYSICIANS BY THE ARKANSAS TUBERCULOSIS ASSOCIATION

"A CHRISTMAS SEAL SERVICE"

ACCEPTABLE STANDARDS IN THE TREATMENT OF TUBERCULOSIS

A Joint Statement of the Committees on Therapy and on Administrative Problems of the American Trudeau Society, *American Review of Tuberculosis and Pulmonary Diseases*, April, 1956.

This statement represents the joint and considered opinion of the American Trudeau Society Committees on Therapy and on Administrative Problems.

In recent years the discussion of hospital and home care of patients with tuberculosis has tended to cloud certain concepts which need re-emphasis.

Tuberculosis remains a chronic, infectious disease. It requires long and continuous treatment. The physician should be assured of the cooperation of the patient and family. This is necessary to be sure that the treatment and other recommendations made will be followed in compliance with good clinical and preventive medical practices and the regulations of the local Boards of Health.

Good medical practice requires the maximum facilities for clinical evaluation of a case, which, in most instances, can be done best in the hospital where appropriate treatment can be started. Preferably it should be continued until the patient's condition is satisfactorily stabilized. Now with more effective treatment methods, it may be reasonable to modify the period of hospitalization for certain selected cases. The treatment of tuberculosis remains difficult and the results in individual cases are frequently unpredictable. When home care is used, it must be carefully coordinated with hospital care, particularly during treatment of the active stages.

To secure the best results, certain standards must be met:

1. **Medical Care.** The patient should be under the continuous supervision of a well-trained physician or group of physicians who thoroughly understand the care, management, and treatment of tuberculosis. As most cases will involve both hospital and home care, there must be maximum coordination of inpatient and outpatient services

and careful cooperation with the private physician in the approach to this treatment.

2. **Diagnosis.** Facilities must be available for the diagnosis and subsequent management of all patients. These would include readily available roentgenographic examinations with facilities for special examinations, such as stereoscopic films, planigraphy, fluoroscopy, and other needed measures. Provisions must be made for clinical laboratory examinations, biopsy, bronchoscopy, and other necessary tests so frequently required to make a correct diagnosis.

3. **Isolation.** Tuberculosis remains a communicable disease and this fact needs to be kept continuously in mind. Facilities must be available for the isolation of the patient to protect the members of his family and the public. It must be remembered that sputum often does not become negative for *M. tuberculosis* during the first several months of treatment and too frequently fails to convert in advanced cases even under the best therapy.

4. **Nursing.** Rest and nursing care must be assured for the patient. Provisions for rest must include both physical relaxation and psychological rest with all that this implies. Nursing care includes not only the physical aid given by the nurse to the patient, but also the assistance to the physician in the education of the patient concerning his disease and the necessity for treatment.

5. **Nutrition.** A well-balanced diet is a necessity. Assistance in the selection and preparation of this diet will be needed, particularly in the early months of therapy.

6. **Drug Therapy.** Antimicrobial therapy must be available for long-term, continuous treatment in accordance with accepted regimens. The drug regimen should be determined on medical factors alone, and should not be influenced by the convenience of the patient, physician, or nurse. **Once started, antimicrobial treatment should be**

continued without interruption as long as medically indicated.

7. **Sputum Examinations.** Laboratory facilities must be available to provide periodic examinations of sputum or gastric contents at regular intervals. This will vary from frequent examinations at the start of treatment to at least bi-monthly examinations after several months. Studies must include cultures at regular intervals, especially when smears are negative for *M. tuberculosis*. Cultures of positive sputum are necessary for diagnostic identification, viability, and drug-susceptibility tests. It is advisable to include the studies of the bacilli for drug susceptibility, and the results should be evaluated in conjunction with clinical data. Alterations in therapy should not be made hastily on the basis of these results alone. Other laboratory studies to detect early evidences of drug resistance should be made.

8. **Surgery.** Surgical consultations should be held early and often, in view of the large number of patients who require surgery. There must be access without delay to hospitals well equipped for thoracic surgery.

9. **Adjunct Services.** All auxiliary services such as recreation, occupational therapy, education, medical social service, and rehabilitation should be available from the beginning of the treatment period.

10. **Follow-Up.** Long-term clinical, radiographic, and bacteriologic follow-up is essential after the patient returns to community life and should be available in order to detect a possible relapse.

11. **Patient Education.** It is essential for the patient to understand his disease for successful and permanent recovery. Patient education by the physician, assisted by the nurse and others, thus becomes of major importance in treatment.

The patient with tuberculosis needs all of the above-mentioned services during various periods of his disease and treatment. Neither home care nor hospital care that fails to provide these services can be considered adequate at this time. It has not yet been proved that even the less destructive forms of tuberculosis can be treated adequately without these aids, although many studies are now in progress.

Most patients would benefit and could be assured of better success if treatment were initiated and continued in a hospital for as long as indicated before being continued in the home. It seems obvious that these necessary facilities and

services can best be provided in a hospital during the active stages of the disease. During subsequent phases, these services should be made available to the patient at home.

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BOOK REVIEWS

Epilepsy and the Law: Roscoe L. Barrow and Howard D. Fabing, M.D. Paul B. Hoeber, Inc., New York City, New York. 1956 First Edition—177 pages.

This excellent book reviews the entire subject of epilepsy laws which have lagged far behind medical progress in controlling epileptic seizures. The medical partner of this team, Dr. Howard Fabing, is one of the leading neurologists of the world whose experience with convulsive seizures is very wide. The authors have been carrying out a crusade for several years to better the various laws of our United States as affecting the epileptic patient. The book points out that there are approximately 1,500,000 epileptics in the United States. The medical view that epilepsy is an inherited condition has been discarded but many states still have antiquated laws denying the right of epileptic individuals to marry. In several states it is a crime for an epileptic to marry. In four states the marriage of epileptics is declared void by statute. At the present writing there are sterilization laws in twenty-eight states for epileptic individuals. Laws affecting the granting of drivers' permits to epileptics are very diverse in the various states where limitations are made. In seven states physicians are required by law to report epileptic patients to the administrator of the drivers' license law. In the light of modern scientific advance in the diagnosis and treatment of the epileptic individual, the authors make several recommendations for the modernization of laws affecting marriage, sterility, employment and the right to drive a vehicle. The book is recommended for its accuracy and completeness in reviewing the entire epileptic problem.

—Louis A. Cohen, M.D.

Roentgen Signs in Clinical Diagnosis: Isadore Meschan, M.A., M.D. W. B. Saunders Company, Philadelphia and London. August, 1956. Pp. 1,058. \$20.00.

This excellent book on clinical radiology will hold the widest possible interest to Arkansas physicians. Dr. Meschan is known to most of the practicing physicians in Arkansas as the former Professor of Radiology at the University of Arkansas School of Medicine. During his tenure at the University of Arkansas School of Medicine, Dr. Meschan prepared a large portion of this excellent textbook. Many of his collaborators are currently at the University of Arkansas School of Medicine. This book is well written and well illustrated. It includes chapters on the fundamentals of radiology which includes discussions of how to develop films, how to protect one's self from

"My back
was so tight
I couldn't
even get on
and off
the bus;
now I can
climb stairs."

"Take it
from me,
you should
be glad
you saw him
early in the
game so he
could do
some good."

"Good?—
why, he's
got me doing
exercises
I haven't done
in years."

"I hope
he helps
my knee
that quick."



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Evaluation of Antihypertensive Drugs

CECIL F. BOULDEN, M.D.*

In the past decade we have begun a new era with respect to the management of primary essential hypertension, which has been made possible by the introduction of a large, if not bewildering, number of hypotensive preparations. Yet to be entirely realistic all of us know that we still lack the ideal drug which will lower the pressure to satisfactory levels without producing unpleasant and sometimes dangerous side effects. It is at times refreshing to find correctable cause for high blood pressure, such as pheochromocytoma, Cushing's syndrome, unilateral renal disease or a coarctation of the aorta, but unfortunately at least 90 per cent of our hypertensive patients must be designated by a generic term as having essential hypertension. No doubt there are several possibly pathogenic factors in hypertension which vary in importance from patient to patient, which should be considered by the physician in his appraisal of any single case. It is particularly important that each of us consider the importance of psychogenic, as well as physiologic and pathologic factors, while we are also deciding which of the drugs would best suit the individual case in question. It is not within the scope of this paper to discuss all of these factors, but I feel it would be negligent for me to stress entirely the importance of drug factors in the management of hypertension and completely overlook the importance of an aggressive approach to the overall management.

Because our personal experience with the older forms of therapy was disappointing in general, in that the more severe disease failed to be influenced uniformly, this discussion will be largely confined to the use of modern drugs with one exception. Admittedly there still may be a place for the use of thiocyanates in the treatment of hypertensive vascular disease, especially that complicated by headache and emotional instability. But even the strongest advocate of these drugs points out that

while they may cause satisfactory reduction of blood pressure in more than one-third of the patients, the drug is dangerous and not even the precaution of obtaining frequent blood levels will prevent occasional fatal intoxication. Thiocyanates should be used only on patients with good renal function, and if used the blood level should be estimated every week at the beginning of the dosage adjustment so that it does not rise above 10 mgs. concentration per 100 cc. Thyroid enlargement, mild myxedema, and even goiter may appear during thiocyanate administration due to the effect producing the blockage of the formation of thyroxin in the thyroid gland. If there is a definite reduction in blood pressure or marked symptomatic improvement, the dosage is gradually adjusted downward so that the patients who do respond to thiocyanates may continue to have good therapeutic effect and not as much toxicity with the blood level between 4 and 8 mgs. per cent. After the final adjustment of dosage these patients may be seen at intervals of approximately one month when blood levels should always be determined.

The first of the recently introduced hypotensive agents were more potent preparations of Veratrum, a drug that has enjoyed intermittent vogue in the treatment of toxemia of pregnancy. The Veratrum alkaloids have received extensive attention as antihypertensive agents. Among the preparations available for therapeutic use are Alkavevir (Veriloid), Protoveratrine A and B (Veralba), Protoveratrines A and B Maleate (Provell Maleate) and Cryptenamine (Unitensen).

Although there is some difference of opinion among the various investigators as to the exact site of action of the Veratrum alkaloid it appears that the hypotensive action is produced by cardiodeceleration and peripheral vasodilatation resulting from an increase in the number of afferent discharges in certain reflex circulatory pathways. The receptors from

*Delivered at the Arkansas-Oklahoma Sectional Meeting of the American College of Physicians.

which the afferent pathways of the reflex arise are reported to be in the left ventricle, the lungs, the carotid sinus region and possibly the brain. The efferent arm of the cardiodecelerating reflex is vagal, since it is abolished by atropine or vagotomy in the case of at least some of the alkaloids.

Severe hypotension even at rest does occur at times due to unexplained fluctuations in the susceptibility of individual patients to the drugs. Nausea and vomiting are the most common side effects and are more frequently encountered with oral than with parenteral therapy. Other side-actions are precordial distress, sensations of warmth and parasthesias in the extremities, and cardiac irregularity. Even with highly purified and biologically standardized product from this source there is considerable difficulty with dosage. This is because there is variation in sensitivity to the drug in different persons, and because the effective dosage range in any one person not only is highly critical, but may also *vary unpredictably from time to time*, thus the side effects arise after dosage increases of only 10 to 20 per cent in a patient who had no symptoms previously. This may appear occasionally even in patients on constant dosage, and furthermore reductions in dosage of 10 to 20 per cent below that causing symptoms may result in a loss of significant hypotensive effect. Indeed these dosage characteristics of the drug constitute their chief undesirable features. Finally, in spite of the many and varied attempts it has not been possible thus far to increase the range between the hypotensive and the emetic dosage of the Veratrum drugs in man.

Intravenous Alkavervir and Protoveratrine are very potent and useful preparations in the short term management of hypertensive emergencies. A significant reduction of blood pressure can be obtained in virtually all patients who tolerate the agent, but because of the severe hypotensive effects which can occur, an infusion of Norepinephrine should be prepared beforehand and connected through a Y-tube for immediate infusion should the blood pressure decrease excessively at any time. The results in hypertensive encephalopathy and glomerulonephritis or the malignant phase of essential hypertension and

toxemia of pregnancy are often spectacular and may be lifesaving. It should be emphasized, however, that the parenteral administration of effective doses of Veratrum preparations involves the hazard of excessive hypotension with circulatory collapse, and must be carried out under careful medical supervision with detailed direction.

HYDRALAZINE is difficult to classify because of a persistent lack of agreement and of conclusive evidence concerning its site of action. It is a synthetic chemical which has the unique property of causing renal vasodilatation as well as generalized peripheral vasodilatation. It has some peripheral adrenergic blocking effect and, on acute administration, these may cause postural hypotension in some patients. However, these actions are not important on chronic oral dosage.

Although the pharmacology of Hydralazine is not completely understood, the best evidence suggests a central site of action in the mid brain and/or medulla. The results in a true vasodepressor response in experimental animals and in normotensive and hypertensive human subjects. It also has a centrally mediated sympathomimetic effect on the heart as indicated by an increase in pulse rate and cardiac output. This has been responsible for some of the more serious side reactions of the drug, such as palpitation, angina, and occasionally myocardial infarction. This cardioaccelerator effect can be blocked with Rauwolfia, surgical sympathectomy and ganglionic blocking agents, but it is recommended that when Rauwolfia or a ganglionic blockade is to be used in combination with Hydralazine, these drugs should be started prior to Hydralazine in order to prevent the tachycardia.

By now, Hydralazine has had extensive trial, and in the estimation of those of us who have used the drug it has failed to live up to the initial promise which seemed to be offered by a hypotensive agent which increases the renal blood flow. When used uncombined with any other hypotensive agent for a considerable length of time, only a small minority of the cases show sustained worthwhile lowering of pressure.

In most instances attempts to administer doses of Hydralazine with significant hy-

potensive action are sooner or later frustrated by intolerable side effects. The most common of these is severe headache, often accompanied by nasal congestion which has been attributed to the antihistaminase action. The headache is occasionally relieved by antihistamine, but this is not true in the majority of the cases. Nausea, vomiting, abdominal cramps, fever and facial edema are among the side effects which may occur in various combinations. The most remarkable untoward effect, however, has been observed after long term treatment with large doses. It consists in the development of a syndrome resembling rheumatoid arthritis, which may go on to the clinical picture of disseminated lupus erythematosus, including even the presence of L. E. cells. This disseminated lupus disappears on discontinuation of the drug and is alleviated by ACTH.

The parenteral injection of Hydralazine, however, may be valuable in the treatment of hypertensive emergencies just as the Veratrum extracts have, but to a somewhat more limited extent. The best results are obtained when this drug is used in combination with parenteral Reserpine, which will be discussed a little later. The onset of action of parenterally administered Hydralazine appears within 15 to 20 minutes. Therefore, it is given to patients in whom a rapid onset of action is a necessity, or in those who do not respond adequately to Reserpine alone.

Recent studies of the cardiovascular and renal hemodynamic changes produced by intravenous Apresoline in individuals with and without heart failure have shown that it increased cardiac output and renal plasma flow in patients with cardiac insufficiency or with chronic pulmonary disease. The vasodilating effect of Apresoline on the kidneys appeared to be related to the pre-existing degree of renal vasoconstriction and suggests that the drug has an independent action on the kidney as well as on the heart, since the patients who had the lowest initial renal plasma flow tended to have the largest increases following parenteral administration of the drug. An additional augmentation of renal plasma flow secondary to a rise in cardiac output is suggested by the response of hypertensive patients in heart failure who had the

largest increases in both renal plasma flow and cardiac output. Another interesting finding pointed out by Wilkins and his group was that intravenous Hydralazine usually caused no decrease in the renal excretion of sodium and water in individuals with cardiac compensation. However, when intravenous Hydralazine or Apresoline is administered to hypertensive patients in congestive failure, it had a pronounced effect to increase the renal excretion of sodium, potassium and water, which were associated with both improvement in the cardiovascular and renal functions.

Soon after Hydralazine became available the medical profession was introduced to the first of the ganglionic blocking agents which are currently used in the treatment of hypertension. These drugs which block the synaptic transmission of impulses in the autonomic ganglia are the most powerful hypotensive agent available at present for clinical use. There are four of these ganglionic blocking agents currently used in the treatment of hypertension: They are Hexamethonium, Pentolinium (Ansolysen), Mecamylamine (Inversine) and Ecolid, a new synthetic agent which is similar to Hexamethonium and Pentolinium in chemical structure, but reportedly of more prolonged effect at a lower dosage than with these other ganglionic blockers under similar conditions. Since clinical experience is relatively small with Ecolid due to its very recent release for general use, I feel that it should be excluded from this discussion. Of the other three drugs only Mecamylamine is completely absorbed when administered orally, but all three agents interfere with the reflexes responsible for the postural adjustment of blood pressure. Thus, the maximal blood pressure reduction is noted in the upright position. Since all three produce a blockade of sympathetic and parasympathetic ganglia their side effects include constipation, urinary difficulty, dryness of the mouth, postural dizziness, and even syncope.

Hexamethonium has had extensive clinical trial since it was first introduced approximately six years ago, and although it may still enjoy extensive use, other agents seem to offer more advantages and fewer disadvantages. In general, the pharmacologic effect of Pentolinium are similar to

Hexamethonium. Impulses are blocked at both sympathetic and parasympathetic ganglia and the blood pressure reduction produced by Pentolinium is orthostatic. Both drugs are excreted primarily through the kidneys and in both cases the absorption is rather poor and inconsistent, although the duration of action is longer (8 to 12 hours) with Pentolinium as compared with oral Hexamethonium (2 to 4 hours). Roughly, 10 to 20 times the subcutaneous dose must be given orally to achieve the same effect.

The most intriguing of the new drugs, however, is Mecamylamine, which produces a ganglionic blockade longer in duration than that of either Hexamethonium or Pentolinium. This drug's long action and complete absorption gives a more predictable and constant reduction of blood pressure which can be maintained from day to day. Here again the dosage should be adjusted according to the upright blood pressure, and the interval of dosage should not be shorter than 8 hours, for if the interval is shorter many patients exhibit a marked cumulative effect, particularly those requiring large doses. This cumulative effect can be used to advantage, however, in patients who are under very careful observation and those patients who require large doses in the treatment of more severe hypertension appear to have a smoother reduction of pressure with fewer untoward effects when the drug is given more frequently. In ambulatory patients obviously this cannot be attempted and increments in dosage must be made at longer intervals (of at least 12 hours) in a titration fashion until the desired level of blood pressure reduction is achieved.

Although Mecamylamine is a secondary amine rather than a quaternary compound as the other ganglionic blockers previously discussed, the side effects are almost identical with its chemical cousins. The outstanding advantage of Mecamylamine is that it is equally as effective when given orally as when given parenterally, although there is a slightly longer delay before the blood pressure decreases after oral administration as compared with the parenteral route.

All ganglionic blockading agents have several contra-indications or limiting fac-

tors which makes their use somewhat hazardous. One of the most outstanding of these effects is the adverse effect on renal hemodynamics. It is only logical that when a marked reduction in blood pressure is obtained there is a comparable reduction in glomerular filtration rate and renal plasma flow. Although this is not of serious consequence in a patient who has adequate renal function, in a patient with severe renal damage depression of glomerular filtration rate can readily produce renal functional decompensation. Should this occur it must be rapidly reversed by decreasing the dose of the blockading agent and allowing the blood pressure to return to mildly hypertensive levels. Probably the best indication of whether or not this complication is occurring is the information obtained from a periodic check of a blood urea nitrogen. As long as BUN is within normal limits, one can conclude that serious depression in glomerular filtration and associated renal decompensation has not occurred. In a similar fashion it would be anticipated that individuals past 60 years of age, or younger individuals with coronary insufficiency, or indications of cerebral vascular disease would not be logical candidates for this type of therapy. Hypotension in these patients may lead to cerebral or coronary artery thrombosis. Indeed these agents must always be regarded as carefully as a two-edged sword, in that while we are estimating the good that a patient is to receive, we must also evaluate the degree of harm which might ensue from these complications.

The Rauwolfia compounds have been known to Indian medicine for centuries for treatment of a variety of disorders, and the pharmacologic properties of the alkaloids have appeared in medical journals for the past 20 years. Only in the past 4 to 5 years, however, have those of us on this continent been applying its use in the treatment of hypertension to any extent. A large number of these Rauwolfia preparations are available and it seems to be the most frequently administered medication for hypertensive disease. This is true despite the fact that Rauwolfia is not a powerful hypertensive agent, and taken alone may be of little value in severe and especially malignant hypertension. It is available in the form of the whole root

(Raudixin), a partially purified mixture of the alkaloids, the most popular of which is the Alsroxlon fraction (Rauwiloid) and the pure alkaloid Reserpine, which has seemed to become less popular because of the high incidence of side effects.

The precise way in which the Rauwolfia derivatives act is not known. Clinical and laboratory studies suggest a central action at the vasomotor center and above. The most logical consideration is that of Plummer, who observed that all the effects of Reserpine, including sedation, reduced emotional response, peripheral autonomic alterations, and circulatory changes are explainable on the basis of an alteration of the sympathetic-parasympathetic balance by partial suppression of the sympathetic predominance at the hypothalamic level.

Until recently, the untoward side effects of Rauwolfia were believed to be insignificant, but since Rauwolfia has been used for a longer period of time, it has become evident that occasionally it produces depression to the point of psychosis. Stiffness of the nose, somnolence, lassitude, nightmares and frequent bowel movements may be annoying, but are not dangerous. On rare occasions, Rauwolfia produces typical Parkinsonism with rigidity and tremor. But all of these side effects will clear at a variable interval after the drug is discontinued.

Reserpine, when given parenterally, is probably the most useful antihypertensive agent available for the treatment of hypertensive emergencies. This is quite a contrast to the response of the same drug after oral administration; however, there is a latent period of about 1 to 2 hours before the blood pressure decreases following either intravenous or intramuscular administration. Therefore, if immediate reduction in blood pressure is required a more rapidly acting drug is indicated. The antihypertensive effect of this drug is manifested in the recumbent as well as in the upright position, which is of considerable advantage in the treatment of acutely ill and bedfast patients. Likewise, the decrease in blood pressure is slow, and the relatively rare instance of excessive hypotension permits effective and safe therapy without the necessity for constant bedside

attendance by the medical and nursing personnel.

At present, it appears that a Rauwolfia preparation should be employed in the treatment program of virtually all patients who are receiving *autonomic* drugs for the management of hypertension. Patients with mild or labile hypertension may become normotensive on Rauwolfia alone, but if the response is less than optimal a more potent hypotensive agent may be added to the regimen. With severe or rapidly progressive hypotension, Rauwolfia and a more potent agent may be used in combination from the outset of therapy, because of its potentiating effect which permits a lower dosage of Rauwolfia and because of its ability to block some of the untoward effects of the other drugs. (An example being the blockade of the cardio-accelerator effect of Hydralazine or constipation from ganglionic blockaders.)

On a theoretical basis, drugs blocking transmission of the sympathetic nerves at their nerve endings would seem ideal and less prone to produce side reactions due to other pharmacologic effects. Thus the concept of adrenergic blockage was initially regarded with optimism. The drugs involved do not block sympathetic cardio-accelerator impulses to the heart; therefore, Dibenamine, Dibenzylamine and Phentolamine (Regitine) have a somewhat limited effect. Dibenzylamine blocks vasoconstrictor impulses at the neuro-effector in the arterioles. Since sympathetic adjustment of the blood pressure to postural change is also blocked, the response here again is primarily an orthostatic one. And since the tachycardia which results is not blocked when the drug is used alone, there may be palpitation and angina during Dibenzylamine therapy. It may be used either orally or parenterally, and its maximal effect is obtained about two hours after oral administration. *Side effects* occur in about *two-thirds* of the patients that are continued on this for longer than three months. Dibenzylamine in combination with Rauwolfia, with or without Protoveratrine, produces a significant reduction in the standing blood pressure in about 74 per cent of the patients, rendering about 50 per cent of them normotensive. The effectiveness of Protoveratrine in this com-

bination (Mio-Pressin) is quite questionable, however.

Rauwolfia with ganglionic blockade by Hexamethonium, Pentolinium, or Mecamylamine is probably the most potent regimen now available. It is effective in most patients, but may be difficult to manage without untoward effects. Mecamylamine alone and in combination appeared to offer great promise, but recent studies indicate that on long-term therapy for four months or more, only about 60 per cent were responsive in the upright position, and only 10 per cent seemed to obtain a response when they remained supine. Moyer and his group have recently published studies which indicate that there is more constant effect and less variability in blood pressure regulation with combined therapy as compared with Mecamylamine alone. In addition the dosage of Mecamylamine is frequently less, and as a consequence there is less blockade of the parasympathetic nerv-

ous system. This reduces the severity of the side effects resulting from blockade of the system that have been mentioned before, *i. e.*, constipation, dry mouth, and blurred vision.

In the absence of an agent which specifically cures the disease, treatment today must consist of one or more of the following measures: education of the patient, weight reduction of the obese, low sodium diet, hypotensive drugs, surgery, and judicious neglect. The decision to treat or not to treat must be based on the patient, for patient's reaction to his disorder, the phase of the disease, and last, on the beneficial potential of the therapeutic agent when weighed against its disadvantages. Unfortunately every available method of lowering the blood pressure imposes important restrictions and risks on the patient who submits to it. The particular capacity of each to help and harm must be considered in relation to each patient's peculiar needs and weaknesses.



Hypofibrinogenemia and Obstetric Hemorrhage

C. PAUL HODGKINSON, M.D.*
DETROIT, MICHIGAN

Critical fibrinogen depression is a grave complication of pregnancy with varied clinical manifestations. Observed most frequently with abruptio placentae, hypofibrinogenemia also occurs as a complication of amniotic fluid embolism and long intrauterine retention of a dead fetus (1, 2, 3, 4). Two clinical manifestations of the disease predominate: hemorrhage and shock.

Theory holds hyperthromboplastinemia to be the basic etiology (5, 6, 7, 8): massive intravascular fibrinogen-fibrin conversion the physiopathologic mechanism; fibrin-gel embolization of the terminal arterioles the cause for shock; and critical

depletion of fibrinogen the defective link in the coagulation mechanism.

The manifest symptomatology is dependent for dominance upon the speed and degree of fibrinogen-fibrin conversion. Although either shock or hemorrhage may predominate the clinical picture, frequently the symptomatology is intermixed and sequential.

Amniotic fluid embolism, characterized by the hyperacute onset of obstetric shock and death, is presumably due to sudden intravenous infusion of thromboplastin-containing amniotic fluid (4). When death is delayed, hemorrhage of blood uncoagulable because of critical fibrinogen depletion may complicate the state of shock.

In abruptio placentae the tempo of onset is slightly less precipitous than in amniotic

*From the Department of Gynecology and Obstetrics, Henry Ford Hospital.

Delivered at the 80th annual session of the Arkansas Medical Society.

fluid embolism. The symptomatology of its acute onset is usually intermixed, with hemorrhage of uncoagulable blood predominating.

Long intrauterine retention of a dead fetus—the “dead fetus syndrome”—is associated with hemorrhage of uncoagulable blood. The onset is gradual and latent hypofibrinogenemia may threaten the patient for weeks before overt symptoms appear (9). Symptoms of shock from embolization have never been reported in patients harboring a dead fetus.

Necrosis of the renal cortex, pituitary and adrenals has been identified with the postrecovery phase of obstetric shock. This delayed variant of fibrin-gel embolization recently has been identified with the fibrinogen-fibrin conversion syndrome. It results from massive embolization of the end arterioles of certain susceptible organs, and the manifest symptomatology depends upon the organ affected.

The critical level of fibrinogen is 90 mgm per 100 cc of plasma. Above this level, coagulation, although defective, is usually adequate. Below this level, spontaneous hemorrhage of uncoagulable blood is prone to occur. The average plasma fibrinogen level is about 320 mgm per 100 cc during pregnancy. Clinical symptoms may become apparent when fibrinogen falls below 150 mgm per 100 cc of plasma. Using serial blood samples obtained at intervals of 30 to 60 minutes, falling fibrinogen values between 250 mgm and 150 mgm per 100 cc plasma concentration, indicate a latent or subclinical form of the disease. The latent form has been recognized in patients having abruptio placenta and the “dead fetus syndrome.”

To recapitulate, classification of clinical manifestations of the fibrinogen-fibrin conversion syndrome may be considered as in the following chart.

DIAGNOSIS

For clinical diagnosis, knowledge of the concatenation of events leading to the development of fibrinogen-fibrin conversion syndrome and its various symptomatology is essential. In the well established case, estimation of fibrinogen values probably offer little more than confirmatory evidence. The present urgent need is for an easy practical guide to detect, and deter-

FIGURE No. 1

1. Clinical manifestations	Frequency	Clinical condition
1.1 Asymptomatic (latent or sub-clinical)		
.1 hyperacute	rare	A.F.E.
.2 acute	frequent	A.P.
.3 chronic	frequent	
.4 delayed	theoretical	D.F.S.
1.2 Symptomatic (clinical)		
.1 Hyperacute		
.1.1 embolic	usual	A.F.E.
.1.2 hemorrhagic	rare	A.F.E.
.1.3 mixed	less usual	A.F.E.
.1.2.2 Acute		
.1 embolic	less usual	A.P.
.2 hemorrhagic	usual	A.P.
.3 mixed	usual	A.P.
.1.2.3 Chronic		
.1 embolic	rare, if ever	
.2 hemorrhagic	usual	D.F.S.
.3 mixed	rare, if ever	
.1.2.4 Delayed		
.1 embolic	usual	lower nephrone
.2 hemorrhagic	rare, if ever	nephrosis; acute
.3 mixed	rare, if ever	necrosis pituitary hemolytic transfusion; hyperacute forms; trauma; shock; burns; pancreatic disease; crush injury syndrome.

Legend: A.P.—abruptio placentae; A.F.E.—amniotic fluid embolism; D.F.S.—dead fetus syndrome.

mine the potentialities of, the latent phases of the disease.

Decreasing fibrinogen values detected by serial blood studies are the most accurate indices of the degree of intravascular fibrinogen-fibrin conversion. It is essential to realize that blood fibrinogen is an unusually dynamic blood protein. For this reason it is necessary, in most instances, to initiate blood studies within two to six hours of the inciting incident if fibrinogen depression is to be detected. The almost unlimited capacity for the liver to resupply the circulating blood with fibrinogen (10), quickly erases the fibrinogen-depressing effect of acute trauma, abruptio placentae and amniotic fluid embolism. Moreover, the serial blood sampling schedule must be set for intervals of two to three hours if the fibrinogen profile is to have diagnostic value.

Unfortunately, precision laboratory methods for assay of blood fibrinogen are time consuming and laborious. For these reasons, tests for quantitative fibrinogen are not always available as routine tests in hospital laboratories. Schneider (11) and Bonsnes and Sweeney (12) have published semiclinical tests for quantitative estimation of fibrinogen concentration which require less time and laboratory

detail. The "clot observation test" described by Weiner, Reid and Roby (13) has proven of most practical value for clinical use—particularly in the middle of the night when laboratory help is frequently not available.

Experience has shown that when fibrinogen concentration of plasma falls below 150 mgm per 100 cc of plasma, the fibrin architecture of clots is frail and subject to fragmentation and dissolution. Above this level, the clots are firm and stable. The phenomena of the "clot observation test" is dependent upon this observation.

To perform the "clot observation test," 5 cc of unoxalate-treated blood is placed in a dry test tube measuring approximately 8 mm in diameter. The blood is observed for clotting by gently tilting the tube at intervals of 2 to 4 minutes. Normal blood will clot in 8 to 12 minutes and remain intact for at least 24 hours. If no clot forms, the fibrinogen concentration can be assumed to be less than 60 mgm per 100 cc of plasma. If a flimsy clot forms which fragments and undergoes dissolution within 20 to 30 minutes, the fibrinogen concentration can be assumed to be less than 100 mgm per 100 cc of plasma. When the fibrinogen concentration is above 100 mgm per 100 cc plasma, the clots formed are observed to be progressively more firm and stable.

Clinical recognition of the massive fibrinogen-fibrin conversion syndrome is seldom difficult. Shock with its cognate symptoms and hemorrhage of uncoagulable blood, either alone or intermixed, are outright symptoms of sufficient prominence to unmistakably herald the presence of critical hypofibrinogenemia. Laboratory estimation of fibrinogen concentration for diagnosis under these circumstances is perfunctory.

Efforts to detect prodroms of the disease complex have not been entirely rewarding. One observation of possible importance is persistent tachycardia. This feature has been observed in several patients who had latent or asymptomatic hypofibrinogenemia secondary to abruptio placentae and long retention of a dead fetus. The tachycardia persisted over a 12 hour period and averaged between 110 and 120 per minute. It was observed in the absence of hemorrhage and shock in patients whose fibri-

nogen fell to levels as low as 140 mgm per 100 cc of plasma. The importance of this observation as a warning symptom remains to be proven.

TREATMENT

The treatment of hyperacute, embolic and hemorrhagic thromboplastinemia of amniotic fluid embolism is symptomatic. Cyanosis, apnea, pulmonary edema, hypotension and hemorrhage of uncoagulable blood need urgent attention. Ultimate recovery depends upon the removal of fibrin, presumably by naturally present fibrinolysins, and the regeneration of fibrinogen.

Oxygen therapy administered with increased pressure by face mask proved effective for improving blood oxygenation for one patient who survived four days. Hypotension is best treated by long-lasting sympathomimetic drugs and guarded administration of parenteral fluid. Overloading the circulatory system is a real danger for shock of this type, and, occasionally, when pulmonary edema is a prominent symptom, phlebotomy may be advisable. Hemorrhage of uncoagulable blood under these circumstances is controlled best, after full consideration of all dangers involved, by the intravenous administration of 8 to 12 grams of fibrinogen (14).

Page and others (15) classified abruptio placentae according to the grade of severity, and, on this classification, advised therapy. This rational approach is recommended as follows: Grade No. 1 is characterized by external bleeding, mild uterine tetany but no maternal shock. These patients are best treated by replacement of blood loss, rupture of the membranes, and induction of labor. Grade No. 2 is characterized by uterine tetany, uterine tenderness, fetal distress or death, but no maternal shock. Treatment is directed toward early detection of evidence of thromboplastinemia, artificial rupture of the membranes, and, if fetal heart tones are heard, an immediate Caesarean section. Grade No. 3 is characterized by maternal shock, coagulation defects, uterine tetany and intrauterine fetal death. In this group, treatment for critical intravascular fibrinogen-fibrin conversion is paramount, and had best be corrected before Caesarean section or vaginal delivery is undertaken. Restoration of blood volume and deficient fibri-

nogen concentration should be accomplished by the administration of fresh whole blood, and, if necessary, fibrinogen. The wise obstetrician will choose the least traumatic type of delivery. A fully ripened, partially dilated or easily dilatable cervix weighs the decision in favor of vaginal delivery. Cervical conditions less favorable support Caesarean section as the decision of choice.

In chronic hemorrhagic defibrination of the "dead fetus" syndrome, the gradual depletion of fibrinogen, sometimes to subcritical levels, has come to be recognized by obstetricians as an uneasy threat of serious potentialities (9 and 16). This information has prompted a tentative shift from the time-honored, complacent, therapeutic attitude which deprecated unnatural intervention for the long retained dead fetus.

The harassing period between fetal death and delivery should become a time of alert expectance. Blood should be obtained at weekly intervals and assayed for fibrinogen concentration.

If the fibrinogen concentration falls below 150 mgm per 100 cc of plasma, preparations should be made for active intervention. Fresh whole blood and at least 8 grams of fibrinogen should be available. If the daily fibrinogen concentration continues to fall, the membranes should be ruptured. Prophylactic antibiotic therapy should be administered. This should be done as the initial step without regard to the method of delivery subsequently to be elected.

With the membranes ruptured, propitious efforts can be commenced which favor refibrinogenation of the blood. Once the thromboplastin influence is eliminated, natural regeneration will rather promptly raise the fibrinogen to a safe level. Fresh whole blood should be used in quantities sufficient to maintain adequate circulating blood volume. The intravenous administration of fibrinogen should be used for emergency treatment to control hemorrhage.

Fibrinogen for intravenous administration for clinical use has become commercially available. It is necessary to emphasize that sterilization methods have not been entirely successful to render fibrino-

gen preparations free of the virus of infectious hepatitis. In fact, the concentrating methods used to obtain the fibrinogen also concentrate the virus. The danger of infecting a patient with the virus of infectious hepatitis must always be considered as a threat of more than average magnitude. Fibrinogen should not be used promiscuously. In patients necessarily treated with fibrinogen, gamma globulin administered in large dosage and repeated at five week intervals over a period of at least six months has been recommended for prophylactic protection against virus hepatitis (17).

Treatment of the delayed type depends upon the organ affected. Bilateral renal cortical necrosis (lower nephron syndrome), pituitary necrosis (Sheehan's Disease), and adrenal cortical necrosis have been observed as sequelae to the hyperacute and acute phases of intravascular massive fibrinogen-fibrin conversion syndrome. Treatment is supportive with full attention given to maintenance of proper electrolyte and water balance during the phase of organ insufficiency. Ultimately, the outcome depends upon the capability of the organ to recover its function.

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The New Importance of Femoral Arteriography

M. M. KEIRNS, M.D.

BAPTIST MEMORIAL HOSPITAL
MEMPHIS, TENNESSEE

I. INTRODUCTION

For many years an occasional femoral arteriogram has been done; however, they have been few in number and of relatively little interest because of their limited clinical value. Since the advent of successful arterial grafting in 1949 by dos Santos (1) and others, this procedure has assumed vital new importance. Information obtained from the femoral arteriogram is one of the cornerstones of the treatment by which the patient with occlusive arteriosclerotic vascular disease is again given the use of his legs. And as the life expectancy steadily rises so shall increasing numbers of these unfortunate patients present themselves for treatment.

Thirty years ago amputation was practically the only method of treating occlu-

sive arterial disease of the legs. In the late 20's and 30's sympathectomies and embolectomies were offered by de Takats (23) and others, and later endarterial stripping. These procedures aided a limited number of patients to a limited extent. Now grafting offers half, or more, of the patients with arteriosclerotic disease of the legs nearly normal locomotion for an extended period.

This discussion is confined to a consideration of arteriograms obtained by injection of the peripheral vessel itself and does not include those studies that may be obtained as a part of lumbar aortography.

II. THE CLINICAL AND ANGIOGRAPHIC EVALUATION

The presence of occlusive arterial disease is determined clinically by means of study-

ing the pain pattern in the legs, observing tolerance to exercise, palpating pulses, and observing levels of ischemia. Oscillometric studies may define the uppermost site of block but give little information as to whether a graft may be successfully inserted. de Takat's states that: "Arteriograms accurately define the condition of vessels and exact sites of stenosis as no other method."

For the sake of clarification in describing the arteriograms and evaluating a case for treatment the following classification of cases is useful (6) :

Group 1. Intimal disease only. (Stenosis without occlusion.)

Group 2. Occlusion, short or long segment, with distal segment filling. (Filling must include the tibial fibication of the popliteal artery.)

Group 3. Occlusion without distal segment filling.

Greenwald *et al.* (6) in 103 arteriograms on 76 patients reported 27 per cent in Group 1, 51 per cent in Group II, and 22 per cent in Group 3. We have seen less Group 1 patients and more Group 2 patients with about the same percentage falling in the hopeless Group 3.

Grafting is feasible in Groups 1 and 2 if severe intimal disease does not extend beyond the area where grafting is possible. Grafts that extend from the bifurcation of the common femoral artery to the bifurcation of the popliteal into the anterior and posterior tibial, below the knee, may be readily inserted. Grafting the tibial artery itself is impractical at present because of its size; but grafts have been successfully made that extended from the common iliac to the popliteal, a distance of over 19 inches (5). Fortunately, the common sites of predilection for stenosis or occlusion are not at the various bifurcations but at the following points:

- (1) Common iliacs.
- (2) Hypogastric artery near its origin.
- (3) Superficial femoral at the upper end of Hunter's Canal.
- (4) Popliteal, proximal to the tendinous arch of Soleus in the Popliteal fossa.

III. TECHNIC

The techniques used in obtaining femoral arteriograms have been highly varied. No two radiologists seem to use the same method throughout. However, the variations are not important as long as the patient is not harmed and the surgeon can be given a precise accurate evaluation of the circulation studied.

1. A 14 gauge thin walled needle is inserted through the sterilized skin in the femoral triangle into the femoral artery, after novacaine infiltration. (We have not found a general anesthesia necessary.)
2. 20 cc of 35 per cent Diodrast is injected as rapidly as convenient—in 3 to 5 seconds. During the injection and until the first film is exposed, the injector compresses the femoral artery against the superior ramus of the pubis.
3. The first film, 14 x 17 or 7 x 17, a view of the thigh, is made with a standard radiographic machine, using screens and a bucky diaphragm.
4. Arterial compression is released, the bucky tray pulled out, a second film placed on the table under the patient's lower leg so as to overlap the first, and a second exposure made with a portable machine. Careful coning aids in protecting personnel in the first film during the second exposure.

The chief advantage of this method is simplicity. Only equipment ordinarily present in any roentgenographic laboratory is used. We have had no complications to date.

IV. RESULTS OF GRAFTING

The final proof of the value of femoral arteriography lies not in the beauty of the films produced, or the successful use of a complicated procedure, but in the numbers of patients who avoid amputation and are rehabilitated. Shaw and Wheelock (5) reported on 21 patients grafted over the past 2 years. Sixteen of the 21 patients had successful grafts inserted with 2 late thromboses (occurring 3 and 4 months postoperatively). However, when arterial homografts were used, 12 of the 13 patients were successfully grafted with only one later thrombosis. Whereas, 4 of 8 venous autographs were successful with one late thrombosis.

In those patients successfully grafted, all gangrenous slough healed, and they were able to walk one mile at 120 steps per minute unless other diseases—such as angina—prevented this violent exercise. None of those patients whose grafts failed were made worse than their preoperative conditions as proved by exercise tolerance.

V. OTHER USES OF ANGIOGRAPHY

If on angiographic studies, the patient is not found suitable for grafting, other uses can be made of the information obtained. A fairly accurate prognosis can be made along with some estimate of the value of lumbar sympathectomy on the basis of the visibly developed collateral circulation.

Furthermore, Veal (7) as early as 1935 stressed the value of the femoral arteriogram as the most accurate method of determining the correct site of amputation in occlusive arteriosclerotic vascular disease. The number of patients requiring revision of the stump can be considerably reduced when the original amputation site is selected on the basis of the angiogram.

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◆ What's NEW ◆

ALLERGY

THOMAS G. JOHNSTON, M.D., AND ALAN G. CAZORT, M.D.
LITTLE ROCK, ARKANSAS

Exciting developments in the field of allergy during the past several years have been few. Most progress has been made in symptomatic treatment. Extensive reviews of recent articles on allergy have been summarized by Burrage (1) and Haplin (2).

BASIC RESEARCH

The sites of antibody formation, blocking antibodies, and sources of antibodies are just a few of the subjects under investigation at the present time. However, no indisputable information has been obtained unless it is the fact that antibodies exist in the gamma globulin fraction of the serum.

CLINICAL ALLERGY

Advances in basic research as yet have not resulted in improvement in patient care. Treatment is still based on finding the offending agent and its removal, immunizing injections when avoidance is impossible, and symptomatic treatment.

DRUG ALLERGY

Drug allergy is becoming more frequent. Numerous new medications produce new and old drug reactions. The tranquilizers are a good example. Meprobamate (Equanil and Miltown) cause many reactions the most common being urticaria, angio edema, purpuric lesions, and an erythematous flush with a febrile response.

Anaphylactic reactions to penicillin are becoming more frequent with numerous deaths. Tons of penicillin are used yearly for the common cold in which penicillin is of no value. Immediate reactions seem to be more frequent in the asthmatic. Improper or inadequate treatment of anaphylaxis in many cases has resulted in death. Aqueous Adrenalin (Epinephrine) 1-1,000 must be administered immediately subcutaneously and/or intravenously. Intravenous Steroids such as Solu-Cortef and the antihistamines may be used *but only after Adrenalin has been properly administered.*

We believe that a simple scratch test on the skin through a drop of the penicillin to be used will usually anticipate a dangerous anaphylactic reaction. This may be done with a needle as in a smallpox vaccination or with a dull scalpel. One cannot predict the delayed or serum sickness type of reaction by skin test.

A controlled study failed to show that an oral and/or parenterally administered antihistamine produced any significant effect on the incidence of delayed or severe penicillin reactions (3).

There has been speculation concerning the possibility of sensitizing children to penicillin with the 200 units in one cubic centimeter of Salk vaccine. We do not believe there is danger, though this dose might cause some reaction in one highly sensitized.

Penicillin was found in 11.6 per cent of samples of raw and pasteurized milk containing up to 80 units of penicillin per quart (4). Penicillin is frequently administered to cows for mastitis. We have seen no evidence that this amount of penicillin is a factor in the illness of a penicillin sensitive individual.

Penicillin should be given only when necessary with skin testing prior to administration in anyone who has previously had penicillin.

STEROID AND CORTICOTROPHIN THERAPY

Steroid and Corticotrophin therapy have been of great help. Indications and contraindications seem clearer. Indications are any severe allergic problem such as intractable bronchial asthma, severe drug eruptions, uncontrollable hay fever, and severe contact dermatitis. Only short courses are necessary in these problems. Obstructive pulmonary emphysema with asthma may deserve maintenance therapy.

Common contraindications are active or recent tuberculosis, peptic ulcer, and severe diabetes.

Prednisolone and Prednisone rarely cause salt retention and elevation of blood pressure as do the older drugs but possibly are more ulcerogenic.

Cortisone should be given intramuscularly before and with surgery in a patient who has received or is receiving the Steroids. It is recommended that 200 milligrams be given two days prior to opera-

tion, one day prior to operation, the day of surgery, and the day following surgery.

Serious complications such as perforation and/or hemorrhage of a peptic ulcer and masking of a severe infection such as pneumonia have been reported. Steroids have also caused osteoporosis in long term therapy leading to spontaneous multiple vertebral fractures. Anabolic substances such as Testosterone should be administered concomitantly if long term therapy is necessary.

Rapid withdrawal may lead to a "relapse and rebound" effect.

There is no such thing as a proper maintenance dosage. This varies from patient to patient and from day to day. In fact, it even varies from hour to hour.

The Steroids have not and cannot "cure."

PSYCHOSOMATIC FACTORS

Psychosomatic factors or "nerves" are as important as in other chronic diseases—no more or no less. Psychiatry promised much but clarity has been lacking.

CONCLUSION

Theories of antigen-antibody reaction, site of antibody production and types of antibodies remain controversial. The increase in the use of drugs has led to an increased number of allergic reactions. The promise of a new era by the Steroids has not been fulfilled. True, there is now a reliable method of bringing relief to those with allergic symptoms, but Steroids are not fast enough in anaphylactic reactions and often lead to complications. They do not cure. During the past several years interest and organization have augmented research, both basic and clinical, which should solve some important problems in the near future.

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Editorial

THE SELF-MADE MAN—A *Myth*

ALFRED KAHN, JR., M.D.

The self-made man does not exist. This is particularly true of the physician, but is also true in all other walks of life. He attains the eminence of a doctor of medicine through help from many others.

In the first place, our medical schools are not, as popularly believed, supported by the tuition of their students. It is true the tuition supplies some income to the school, but with modern research, expensive equipment is necessary; even the apparatus necessary for laboratory and clinic instruction is costly. Tuition alone cannot defray this. Medical curriculum has become so complex that a very large faculty is necessary to teach a balanced program to the student. To pay each faculty member a fair salary is an utter impossibility. Instead, the medical schools rely on practicing physicians to donate their time free of charge to teach medical students and younger physicians; this is a heavy burden but is freely given by thousands of part-time physicians.

It behooves us as doctors of medicine to recognize these facts. The corollary is that having received so much from others, we should repay these obligations. There are many ways this can be accomplished. Outstanding is the need for financial aid to support the medical schools. A gift, no matter how small, given directly to a medical school or through the A.M.A., will assist in the overall medical education program. A very meaningful method of repayment is the donation of one's time to teaching students and house staff in the medical schools and hospitals; there is benefit here to be derived by the teacher, for teaching associations invariably provide intellectual stimulation and thus further progress in one's field of activity.

There are further medical ramifications of this same philosophy. In past years in the lay press of national publications there have been insinuations of conflicting interests between physicians in limited fields and general physicians. It is a credit to our Arkansas Medical Society that this has never been a problem here. The whole idea

is specious. For example, there are not even two distinct groups; there are many degrees of specialization; many good general surgeons refer their cardiac surgery to surgeons who limit their surgery to the heart or thorax; many internists take X-rays. Of much greater consideration is that the general physician and the specializing physician need each other for the best care of the patient; it is a symbiotic relationship; they complement each other and are of equal importance in the profession. A surgical specialist could not survive in a small community where there are deliveries to be performed, coronary cases to treat, etc. The general physician cannot give up the time to perform procedures which might confine him from his other patients for four or five or more hours; nor does time justify his spending long hours working up a long medical case of such rarity that it might appear very infrequently in his practice; it would not be fair to his other patients or to him as an economic expenditure of time. We physicians are interdependent.

Our obligations do not end with support of our profession. The success of the practicing physician stems from many sources outside himself. A practice succeeds partly from the loyal support of patients who are willing to accept the services of the neophyte physician. They ask and expect little in return at first except his competent medical skill. As he grows successful through community loyalty, the community will expect him in turn to participate in the non-medical worthwhile civic institutions. Backing the worthwhile drives, as the Community Chest, is not to be considered a dun, but an obligation. Participation in and support of good government through association with civic clubs and committees reflects much credit on the physician when time permits this.

We get where we are through the friendly support of others, not just on our own drive. We are not self made and therefore should support the institutions that helped us.

Medicine in the News

The American Medical Association, The United States Food and Drug Administration, The American Cancer Society, and the President's Committee for Employment of the Physical Handicapped have just presented a special citation to Nick Dallis, M.D., who draws the comic strip "Rex Morgan, M.D."

Ground was broken for Texarkana's multi-million dollar Wadley Hospital with appropriate ceremonies on Wednesday, October 10. When the building is completed, it will consist of five stories and a basement and will provide for 150 hospital beds.

The University of Arkansas Medical Center at Little Rock has received \$158,000 in grants to finance a psychiatric study program. Dr. Roscoe A. Dykman, associate professor of psychology, said that the Department of Psychiatry would receive five-year grants of \$100,000 from the United States Public Health Service and \$51,000 from the Commonwealth Fund and a two-year grant of \$7,000 from the Army. Dr. Dykman said that part of the money would be used to study involuntary nerve reactions in animals and humans and would take about a year to complete.

The third annual five-state convention of the American Medical Technologists met at the Grim Hotel in Texarkana October 20-21. About 200 members from Arkansas, Texas, Tennessee, Oklahoma and Louisiana attended.

The Arkansas Radiological Society at its July, 1956, meeting approved the following resolution: "The Arkansas Radiological Society requests that any further revision of the Medical Practices Act of Arkansas include a definite statement that the practices of Radiology, Pathology, and Anesthesiology are recognized as medical practice."

Washington, D. C.—First head of the new National Library of Medicine is the

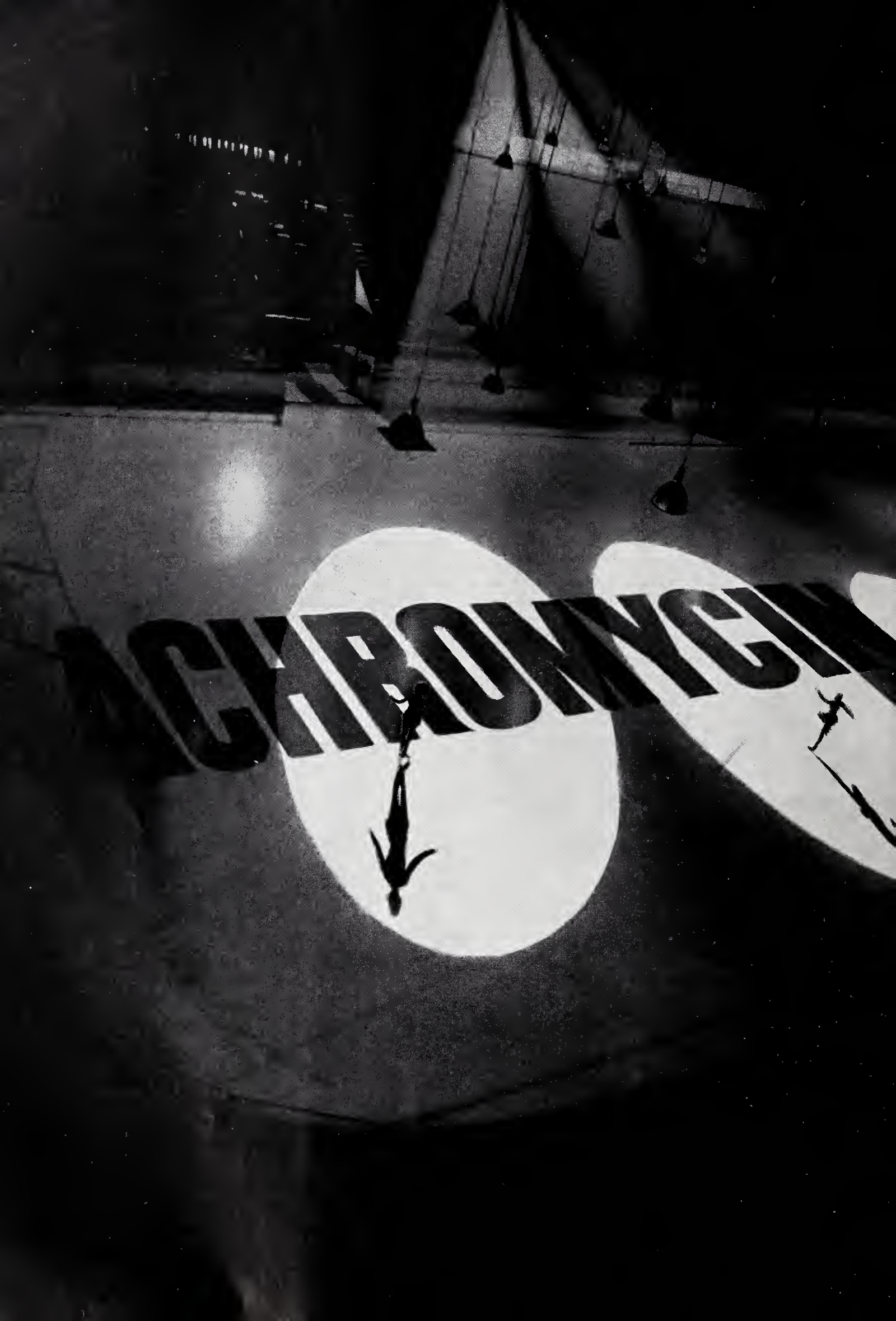
man who steered the Armed Forces Medical Library through the last seven troubled years—Col. Frank B. Rogers. He is on loan to PHS, which is in charge of the new institution to be built up around AFML.

Care of Army Military Personnel AWOL

In a number of cases physicians and hospitals have accepted for emergency treatment members of the Army who were in a status of absent without official leave (AWOL). Upon subsequent submission of vouchers for payment, the physician or hospital has had to be informed that current regulations preclude the payment from public funds for medical treatment rendered military personnel in such a status.

In an effort to inform interested persons of the means whereby payment may be authorized for emergency treatment of a person who is first seen in an AWOL status, it is believed that the proper procedure should be publicized through state journals.

Upon the acceptance by a hospital or physician of a member of the Army, immediate report should be made to the Army commander of the Area in which the civilian medical care is required, the chief of the military district of the area, the nearest Army post commander or the individual's commanding officer, giving the individual's name, serial number, organization, military address, status, nature of illness or injury and statement of the practicability of transfer of the patient to an Army or other governmental hospital. This procedure should be accomplished whether the person is absent with or without official leave in order that his parent organization may be informed of his continued absence by reason of illness or injury. A similar report should be rendered if for any reason an unconscious patient is believed to be a member of the Army. On receipt of an acknowledgment from military authorities authorizing the civilian hospital or doctor to treat the case, the charges for medical care furnished AWOL personnel subsequent to receipt of the authorization may be paid. These statements apply to practically every situation except when unauthorized medical care is furnished for a condition that is not an emergency.



ACHROMYCIN

Hydrochloride
Tetracycline HCl Lederle

in the treatment of

genitourinary infections

UROLOGISTS report the decided advantages of oral efficacy, minimal side effects, and wide range antibacterial activity offered by ACHROMYCIN in the treatment of urinary tract infections.

Finland's¹ group of patients with acute infections of the urinary tract (principally *E. coli*) demonstrated excellent response, both clinical and bacteriological, following administration of tetracycline.

Prigot and Marmell² reported 49 out of 50 patients with gonorrhea showed a negative smear and culture on the first post-treatment visit. Purulent discharge disappeared in these patients within 24 hours after a usual 1.5 Gm. dose of tetracycline.

Trafton and Lind³ found tetracycline (ACHROMYCIN) an effective antibiotic for treating many urinary tract infections caused by both Gram-negative and Gram-positive organisms.

English, *et al.*⁴ noted that a daily dose of 1 to 1.5 Gm. of tetracycline resulted in urinary levels as high as 1 mg. per milliliter.

To suit the needs of your practice and to further the patient's comfort ACHROMYCIN is offered in a complete line of 21 dosage forms.



LEDERLE LABORATORIES DIVISION
AMERICAN CYANAMID COMPANY
PEARL RIVER, NEW YORK



*REG. U. S. PAT. OFF.

References:

1. Finland, M., *et al.*: *J.A.M.A.* 154:561 (Feb. 13) 1954.
2. Prigot, A. and Marmell, M. *Antibiotics and Chemotherapy* 4:1117 (Oct.) 1954.
3. Trafton, H. and Lind, H.: *idem* 4:697 (June) 1954.
4. English, A., *et al.*: *idem* 4:441 (April) 1954.

Statements of account for payment may be forwarded to the individual's commanding officer, or The Surgeon, Fourth Army, Fort Sam Houston, Texas, who will transmit them to their proper destination.

Habit-Forming Qualities of Meprobamate

Chicago.—A Seattle physician today warned that the tranquilizing drug, meprobamate (Miltown or Equanil) can be habit-forming in a small percentage of cases.

Dr. Frederick Lemere gave his warning because of the unprecedented demand for the drug, because of talk of selling meprobamate over the counter without a prescription, and because it has been advertised as non-habit forming.

Chicago, Oct. 8, 1956.—The American Medical Association is about to launch a study to learn what the hospital patient gets for his money.

It will be the second phase of a three-part, five-year study measuring the medical services given to the American people by their physicians. The survey, which will cost about \$100,000 when completed, is the first of its kind—measuring services and not money spent.

Americans Spending More For Hospital Care

Chicago.—For the first time, Americans are spending more for hospital care than they are for physician services, according to an editorial in the current (Sept. 22) *Journal of the American Medical Association*.

Personal expenditures for hospital services during 1955 were 3.13 billion dollars as compared with 3.07 billion dollars for physician services. These figures, which appeared originally in the July, 1956, issue of *Survey of Current Business*, published by the U. S. Department of Commerce, "mark 1955 as a turning point in the history of medical economics," the editorial said.

Chicago.—One in seven physicians in this country is taking graduate medical training either as an intern or a resident, it was reported today.

Washington, D. C.—In addition to helping states make monthly public assistance

payments to certain indigent persons, the federal government for a number of years also has contributed to the cost of their medical care. Because the grants formula is somewhat complicated, and the amount of medical care varies with the states, this U. S. contribution cannot be fixed definitely. It is estimated at about 90 million dollars a year.

About a third of the states now deposit these federal grants—which must be matched 50-50—in a separate fund, from which the medical care costs are paid directly to the vendors, such as physicians, dentists, hospitals, nursing homes and druggists. The remaining two-thirds include medical care costs in monthly checks to the indigent, and expect these people to pay their own medical bills.

But beginning next July 1, this U. S.-state medical care arrangement is going to be drastically altered.

For one thing, the U. S. will increase its payments from the current \$90 million a year to between \$200 million and \$300 million. For another, all medical care money under the new program will be put into a separate fund, from which the indigents' medical bills will be paid, in one way or another, by the state itself.

New York, Oct. 2.—Dr. Thomas M. Rivers of New York City, formerly vice president of the Rockefeller Institute for Medical Research, has been appointed medical director of the National Foundation for Infantile Paralysis, it was announced today by Basil O'Connor, president of the March of Dimes organization.

"Goitrin"

Evidence that overconsumption of certain foods may lead to the development of goiter was presented today by a doctor from the University of Oregon Medical School.

Reporting to a group of the nation's leading medical scientists at a "Symposium on Endocrines and Nutrition" at the University of Michigan, Dr. Monte A. Greer said that high amounts of "goitrin" (goiter causative compound) had already been discovered in both rutabaga and turnip and that other foods were now being investigated.

AMA *Special Report . . .*

MEDICARE

Those Eligible for Medical Care Under New Program

Dependents of: (a) members of the uniformed services, (b) retired members, and (c) persons who died while a member or retired member are entitled by law to medical care under the new act going into effect December 7. The uniformed services are the Army, Navy, Air Force, Marine Corps, Coast Guard, Commissioned Corps of the Coast and Geodetic Survey and Commissioned Corps of the U. S. Public Health Service. However, **all** dependents are not entitled to civilian care.

Care from **civilian** as well as military sources is authorized only for spouses and dependent children of persons on active duty (but only if duty orders are for more than 30 days). Care in **military facilities only** is authorized for unremarried widow, unremarried widower and children of deceased or retired member if dependent at time of spouse's death and for parents or parents-in-law if receiving half cost of support from member at time of member's death.

Note: Furnishing of medical care to dependents not to interfere with primary mission of military facilities, and commanding officer of facility has conclusive determination as to the availability of space and capabilities of medical staff to care for dependents.

Extent of Medical Care to Which Dependents Are Entitled

In **military facilities**, medical care limited to the following: Diagnosis, treatment of acute medical conditions, including acute phases of chronic diseases; surgical conditions; contagious diseases; immunization; obstetrical and infant care; other acute emergencies (temporary treatment); dental care **only** to relieve pain and suffering or as a necessary adjunct to medical or surgical treatment, or in U. S. where adequate civilian dental facilities are not available.

Medical care **not** authorized in military facilities for the following: Chronic dis-

eases; nervous and mental disorders; elective medical and surgical treatment, such as cosmetic surgery; domiciliary care; prosthesis, except that overseas and in remote places in U. S. these items may be supplied at cost; ambulance service except in emergencies; home calls (except if determined to be medically necessary); dental care except as noted above. (Exceptions allowed in special and unusual cases.)

In **civilian facilities**, medical care limited to the following: acute medical conditions, including acute phases of chronic diseases; surgical conditions; contagious diseases while in hospital; complete obstetrical and maternity care; 365 days' hospitalization (semi-private accommodations) for each admission, including all necessary services and supplies by hospital; pre- and post-hospitalization services of doctor for bodily injury or surgical operation, including certain tests; acute emergencies of any nature if threat to life, health or well-being, including temporary treatment of acute emotional disorders; diagnostic tests and procedures during hospitalization.

Payment by the government also is authorized for treatment of certain bodily injuries and a limited number of tests in connection with them when there is no hospitalization. Specifically, payment is authorized for diagnostic tests and procedures for treatment of fractures, dislocations, lacerations and other wounds as prescribed in local schedule of allowances. In such cases when patient is not hospitalized maximum government payment authorized is \$75 for laboratory tests, pathology and radiology examinations. Use of hospital outpatient facilities, such as cast room, for treatment of injury also is authorized.

Medical care **not** authorized in civilian facilities for chronic diseases (except acute exacerbations and complications); nervous and mental disorders; elective medical and surgical treatment; domiciliary care; treatments or procedures normally considered to be outpatient care. (Exceptions allowed in special and unusual cases.)

Note: While hospitalization in civilian facilities is limited to 365 days, dependents requiring hospitalization beyond this time will be transferred to service hospitals or the government may authorize pay for their continued care in the private hospital. Payment for drugs and materials outside hospital not authorized, except those dispensed by physician to patients in his office in connection with treatment of injury.

Limitation on Choice of Facility By Dependents

At the outset of the program, spouses and children of active duty members (the only dependents eligible for both civilian and military care) will have free choice between civilian and military. However, this limitation can be invoked later: If it is shown that use of civilian medical facilities by dependents in a certain area has affected adversely the optimum economic utilization of service facilities, the Secretary of Defense (or of HEW) may restrict dependents in that area to care in a service facility. In defining such areas, the secretary must take into consideration normal commuting time, distance and unusual geographic and transportation factors. Wherever imposed, this restriction on freedom of choice may be waived in an emergency, and under any circumstances spouses and children of active duty members will retain freedom of choice between service and private facilities if they are not living with the service person on whom they are dependent.

Identification of Dependents and Their Admission to Benefits

Dependents will be identified by a "Dependents' Authorization for Medical Care" card (DD Form 1173, one card to a family). In addition to identifying the individual dependents, it also will indicate whether they are entitled to both civilian or military care or only to military care on a "space available" basis. These cards will have to be in use no later than July 1, 1957. Until the new system is in effect, the services may continue to use existing procedures for identifying dependents.

Note: Doctors and hospitals are expected to use "reasonable care and precaution" in identifying dependents. **However, when care is furnished in good faith and subse-**

quently it is determined that the dependent is not entitled to such care at government expense, any action for recovery instituted by the government will be against the dependent or his sponsor, and not against the doctor or the hospital.

Charges Against Dependent For Medical Care

In military facilities, the charge against dependents will be \$1.75 per day for inpatient care, including cost of subsistence.

As a restraint on excessive demands for outpatient care, the Secretary of Defense, on recommendation of the secretary of a service, may set uniform minimal charges for outpatient care.

In civilian facilities, the dependent will pay the first \$25 of expense incurred, or \$1.75 per day, whichever total is the larger, payment to be made to the **hospital**. If the physician decides a private room or private-duty nursing care is required, a portion of the cost will be assessed against the dependent. In the case of treatment outside hospital for an injury, the patient is to pay **the physician** the first \$15 of costs, with the government paying the remainder as authorized by local fee schedules.

Administration from Federal Level and Contract-Making

Secretary of Defense has jurisdiction over Army, Navy, Air Force, Marine Corps and Coast Guard when operating with Navy; **Secretary of Health, Education, and Welfare** has jurisdiction over Public Health Service and for medical care purposes over Coast and Geodetic Survey, and the Coast Guard when not with Navy.

In contracting for medical care, the **Army** is executive agent for all services in U. S., Alaska, Hawaii and Puerto Rico. The Army is now arranging contracts to cover the following: Fees to be paid for physicians and surgeons; provision for review; administrative responsibility of contractors and methods for determining administrative costs; billing arrangements for medical care costs; liaison with contractor; development of budgetary information; processing of complaints with reference to civilian medical care and hospitalization.

Contractors (representing physicians in each state) to have responsibility for re-

solving medical disputes through grievance committees composed of civilian physicians; and **Army's** responsibility does not include a detailed supervision of civilian medical procedures or a detailed inspection of civilian medical facilities. Outside continental U. S., in areas where facilities of the uniformed services cannot provide adequate care for spouses and dependent children, medical care to be provided for them "from acceptable local sources," with each service making its own arrangements.

Eligible dependents, regardless of the service affiliation of their sponsor, are to be given equal opportunity of medical care in any service hospital. Hospital commanders are to establish coordination with each other and with representatives of the local medical society and civilian hospitals "for the smooth referral of excess dependent patient loads to civilian medical facilities."

Note: The Army currently is prepared to enter into medical care agreements with the states, dealing with negotiating and fiscal contractors recommended by state medical societies. The fiscal or disbursing contractor might be the state society, Blue Shield or an insurance company.

Physicians' Services; Limitations, Payment of Fees

In services related to hospitalization, fees to be based on approved local schedule of allowances, including fees of consultants' services which are to be certified as required by attending physician.

Approved local schedule of allowances for hospital treatment for bodily injury or surgical procedure to include pre-hospitalization care and normal after-care following hospitalization.

In addition: Payment is authorized for necessary diagnostic tests and procedures performed or authorized by the attending physician prior to hospitalization or for proper after-care of the **same** bodily injury or surgical procedure for which hospitalized but not to exceed a maximum of \$75 total charges for pre-hospitalization diagnostic tests and procedures and a maximum of \$50 total charges for post-hospitalization tests and procedures.

Note: The monetary limitations noted above (\$75 and \$50) define the govern-

ment's total liability, and in no way affect fees for individual procedures contained in the local schedules of allowances. Also, mechanism is provided for payment by the government in excess of these fees in "special and extraordinary cases."

Complete maternity services include prenatal care, delivery and postnatal care in hospital, office or home, payment to be made to physician on local schedule of allowances.

Also authorized are allowances for (a) laboratory tests, pathology or radiology examinations and other procedures performed or authorized by the attending physician, (b) consultant's fee if certified as required by the attending physician, and (c) newborn infant care (including immunization) outside hospital for up to 60 days, but not to exceed two visits to or by physician following discharge.

On November 7th, to implement the Medicare program in Arkansas, the Executive Committee of the Council—Dr. Louis K. Hundley, Dr. Fount Richardson, Dr. J. J. Monfort and Dr. T. Duel Brown—accompanied by the executive secretary, Mr. Paul Schaefer, met representatives of the Department of Defense in Washington, D. C. On behalf of the Arkansas Medical Society, they reached and signed an agreement on the fees to be charged by Arkansas physicians. As part of the same contract, the government agreed to pay the costs of handling and paying claims through the State Society headquarters. The amount of such costs will be decided as a percentage of general overhead according to the volume of work which the program develops. Certain costs will be paid as a direct charge by the government. The aim of these business arrangements is to make sure that the Society is reimbursed for all costs and on the other hand does not make a profit on the operation of the program.

The Department of Defense agreed to furnish a standard nomenclature of procedures and the Arkansas fee schedule for all members of the Society. The government also will furnish the official claims forms to be used, as well as instructions for physicians. On November 17th, the office of the Surgeon General advised Mr. Schaefer that the claims forms would probably be shipped to his office for distribution before

the end of November. It was anticipated at that time that the standard nomenclature and schedule of fees would not reach individual physicians until after the beginning date of the program.

Claims for payment by physicians should be mailed to the Arkansas Medical Society, 215 Kelley Building, Fort Smith, Arkansas. It is anticipated that payments will be made by the Society to physicians twice each month.

This report covers the basic points of the program. Later more information will be supplied to the medical profession by the American Medical Association, State Medical Societies and the Department of Defense.

Two Testify on Behalf of A.M.A.

On January 25, 1956, Dr. Edwin S. Hamilton, Kankakee, Ill., an A.M.A. trustee, and Dr. Woodruff L. Crawford, Rockford, Ill., testified on behalf of the American Medical Association before a subcommittee of the Committee on Armed Services of the House of Representatives in Washington.

Dr. Hamilton urged that if Congress saw fit to provide additional medical care to dependents "increased emphasis should be placed on the utilization of civilian facilities and the services of civilian physicians."

He pointed out also that such a program would reduce the requirements of the armed forces for physicians and obviate the necessity for any further extension of the Doctor Draft Law.

Percy Priest Dies; Oren Harris in Line For Chairmanship

Rep. J. Percy Priest, chairman of the Interstate and Foreign Commerce Committee that handles most health and medical legislation in the House, died early today (Oct. 12) following an operation for ulcers.

The ranking Democrat, and in line for the chairmanship if his party retains control of the House, is Rep. Oren Harris of Arkansas. Mr. Harris, an attorney, like Mr. Priest has been in Congress continuously since 1940. At the direction of Mr. Priest, the staff of the Interstate and Foreign Commerce Committee presently is engaged in a study of the needs of medical

schools, looking toward a possible bill for federal assistance to the schools. If the Republicans should take control of the House, the committee chairmanship would revert to Rep. Charles Wolverton of New Jersey, who headed the committee in the Republican 83rd Congress.

\$85 Million Spent on Research by Non-Governmental Labs

National Science Foundation reports that in 1953, latest year for which such figures are available, a total of about \$85 million was spent on scientific research in non-profit and commercial laboratories. Commercial organizations spent close to \$35 million, and non-profit organizations more than \$50 million.

A.M.A. Washington Letter

Oct. 12, 1956. — In connection with Dr. Allman's testimony on A.M.A.'s legislative activities, latest annual budget figures give expenses of the Washington Office as \$207,227 for all its activities. Expenses for the Committee on Legislation are \$25,000, and for the Law Department, \$108,225. When combined they total 3 per cent of the budget.

Cancer Detection

A vast new program for early detection of cancer of the cervix was inaugurated at the International Cancer Cytology Congress in Chicago, Oct. 8-13, where key representatives of professional pathology societies launched a plan to increase the cytologic testing services of pathology laboratories throughout the country.

Dr. Cyrus Erickson, of Memphis, Tennessee, who has performed the most exhaustive screening of women unsuspected of having cancer, reported that on the basis of 108,000 women, nearly 5 out of every thousand were found to have pre-cancerous cell conditions of the cervix and body of the uterus.

Hamsters Catch Common Cold

Chicago.—For what appears to be the first time, a hamster, a small squirrel-like animal, has caught a common cold, complete with runny nose, wheezing and swollen nostrils.

This makes the hamster the only animal other than the chimpanzee to catch cold in a laboratory situation, according to five Maryland researchers. Investigators have tried to give colds to many other animals, but they all refused to catch them.

What makes the Maryland research important is the fact that chimpanzees are expensive, while hamsters are easily and economically obtained and easy to handle. In fact, they are "ideal" for common cold research, the researchers said in the September Archives of Pathology, published by the American Medical Association.

Announcements

Mediclinics second annual postgraduate refresher course will be held in Fort Lauderdale, Florida, March 4-14, 1957.

The Florida Academy of General Practice is the local sponsor of the course. The American Academy of General Practice has certified this course for 32 hours of formal postgraduate study — Category I — for those Academy members in attendance.

AMERICAN BOARD OF OBSTETRICS AND GYNECOLOGY

Office of the Secretary: Robert L. Faulkner, M.D.
2105 Adelbert Road, Cleveland 6, Ohio

The next scheduled examinations (Part I), written, for all candidates will be held in various cities of the United States, Canada, and military centers outside the Continental United States, on Friday, February 1, 1957, at 2:00 p. m.

SECOND WORLD CONFERENCE ON MEDICAL EDUCATION

The Program Committee of the Second World Conference on Medical Education announces the following plans for the convening of this Conference:

Place: Chicago, Illinois.

Dates: August 30-September 4, 1959.

THE ANNUAL PRIZE LECTURE

Sponsored by the American Congress of
Physical Medicine and Rehabilitation

To stimulate interest in the field of physical medicine and rehabilitation, the Amer-

ican Congress of Physical Medicine and Rehabilitation will award annually a prize for an essay on any subject relating to physical medicine and rehabilitation. The contest, while open to anyone, is primarily directed to medical students, interns, residents, graduate students in the pre-clinical sciences and graduate students in physical medicine and rehabilitation.

Manuscripts must be in the office of the American Congress of Physical Medicine and Rehabilitation, 30 N. Michigan Ave., Chicago 2, not later than June 1, 1957.

THE AMERICAN CONGRESS OF PHYSICAL MEDICINE AND REHABILITATION

The 35th annual scientific and clinical session of the American Congress of Physical Medicine and Rehabilitation will be held September 8-13, 1957, inclusive, at Hotel Statler, Los Angeles.

The Seventh International Cancer Congress will be held in London, England, July 6-12, 1958, under the Presidency of Sir Stanford Cade. Congress headquarters will be The Royal Festival Hall.

THE NEW ORLEANS GRADUATE MEDICAL ASSEMBLY

The twentieth annual meeting of The New Orleans Graduate Medical Assembly will be held March 11, 12, 13 and 14, headquarters at the Municipal Auditorium.

Eighteen outstanding guest speakers will participate and their presentations will be of interest to both specialists and general practitioners. The program will include fifty-four informative discussions on many topics of current medical interest, in addition to clinicopathologic conferences, symposia, scientific exhibits, medical motion pictures, round-table luncheons and technical exhibits.

INTERNATIONAL ACADEMY OF PROCTOLOGY 1956-1957 AWARD CONTEST

The International Academy of Proctology announces its Annual Cash Prize and Certificate of Merit Award Contest for 1956-1957. The best unpublished contribution on proctology or allied subjects will be awarded \$100 and a Certificate of Merit.

Entries should be addressed to the International Academy of Proctology, 147-41 Sanford Avenue, Flushing, New York.

The Army Medical Service will conduct courses in "Surgery in Acute Trauma" at the Brooke Army Hospital, Brooke Army Medical Center, Ft. Sam Houston, Texas, May 6-8, 1957, and the William Beaumont Army Hospital, Ft. Bliss, Texas, April 1-3, 1957. Similar courses will be held in other parts of the United States, but no others here in the Southwest. Civilian physicians interested in attending either of these courses may apply directly to the Commander of the Hospital where the course is to be conducted.

The Academy of Medicine of Cincinnati will observe the 100th anniversary of its beginning with a week-long celebration Feb. 27-March 5, 1957. The Centennial Exposition to be held in Cincinnati's historic Music Hall will be the scene for the public events associated with the observance.

Arkansas

TRAVELING

And Clipping Bits Here and There

THE WASHINGTON REPORT ON THE MEDICAL SCIENCES

October 15, 1956

AMA Explains Lobbying Duties to Senate Group—Ranking among the leading lobbying organizations—in terms of expenditures—registered with Congress, AMA went before a Senate investigating group last week to tell how and why it tries to influence national legislation. The hearing was one of a series being conducted by a special committee looking into political activities, lobbying and campaign contributions. Chairman is Senator John L. McClellan (D., Ark.). Witnesses for AMA were President-elect David Allman, Atlantic City; C. Joseph Stetler, law department head; and, from Washington office, Dr. Cyrus Maxwell and James W. Foristel, counsel.

From Baxter to Bricker—The interrogation ranged in subject from Whitaker & Baxter "public education" campaign of six years ago to AMA's current espousal of Bricker resolution circumscribing President's treaty-making power. But at no time did questioning by Chairman McClellan or committee counsel get rough. Witnesses dealt forthrightly with AMA's drive earlier this year against social security amendments (HR 7225) and its interest in military dependents' medical care and drafting of doctors, among other Congressional matters. Following are some of the facts and opinions which were brought out in response to questions:

Aggressive support of Bricker resolution was justified by AMA spokesmen as a step to forestall incursion of socialized medicine via international agreement.

AMA's annual income is slightly more than \$9 million, derived in the main from dues (nearly \$4 million) and Journal advertising, which exceeds \$3.7 million. About 2½ per cent of the budget goes into lobbying expenses.

Association's Washington office has 20 employees, six of whom devote part of their time to lobbying activities.

Letter-writing campaign promoted by AMA in its futile effort to defeat HR 7225 was described by Stetler as only such instance of a direct appeal to the membership. "Have you been," asked Senator McClellan of Dr. Allman, "a bit disappointed in the effectiveness of lobbying?" Replied Dr. Allman: "I have been, yes, sir."

FEDERAL MEDICAL SERVICES NEWSLETTER

September, 1956

AMA-American Legion Liaison Committee

At the AMA's 1954 session in Miami, Seaborn Collins, then Commander of the American Legion, addressed the House of Delegates and suggested a special liaison committee, composed of Legion and AMA members, to meet and "work towards a better mutual understanding of the problem of veterans hospitalization."

The American Legion and the AMA Board of Trustees each appointed three members to this Committee (FMS Newsletter No. 3, Jan. 1955) which met a number of times in 1955 and at the beginning

of this year. The Committee's final report was forwarded to the two parent bodies in January, and the AMA Liaison Committee to the American Legion was discharged by the Board of Trustees in February.

The Liaison Committee Report was referred by the Board of Trustees to the Council on Medical Service and its Committee on Federal Medical Services.

Obituary

Dr. James Walter Ryburn, aged 81, who had practiced medicine in Pocahontas and Randolph County since 1901, died at his home in Pocahontas September 24, 1956. Dr. Ryburn was born in Columbia Township, August 24, 1875. He graduated from the Dallas, Texas, Medical School in 1902. For several years he maintained his home at what is now the Stokes community, later moving his family to Manson and finally moving to Pocahontas in 1930 to make his home. He was married to his childhood sweetheart, Mollie Ulmer, who died in May of last year. He is survived by four daughters, Mrs. Ruth Baker of Carondelet, Ill., Mrs. Rufus Valentine and Mrs. Cona Monday of St. Louis and Mrs. Dorothy Frenken of Pocahontas; 7 grandchildren and 7 great-grandchildren.

Dr. Elmon Lawrence Collette, Jr., 45, widely known former Rogers physician, and a member of the medical staff of the Muskogee, Okla., Veterans Hospital, died at his home in Muskogee Saturday, September 22, 1956. Dr. Collette came to Rogers shortly after his release from military service at the close of World War II and engaged in the practice of medicine there for eight years before joining the staff of the Muskogee Veterans Hospital three years ago. He was a native of Fort Smith and a graduate of the University of Arkansas Medical School at Little Rock. Dr. Collette is survived by his wife, Mrs. Janice Collette, two daughters, Lynn and Mary Beth, a son, Elmon Lawrence Collette, III, and his father, E. L. Collette of Fort Smith.

Dr. James K. Hampson, aged 79, prominent physician and archaeologist, died October 8, 1956, in Osceola. Dr. Hampson, who was born in Memphis, attended Professor Jones' Military Academy and was graduated from the University of Tennessee Medical School in 1898. After attending New York Polyclinic School he lived on the family plantation at Nodena from 1900 until 1907. Returning to Memphis, he married Miss Frances Lacost and the couple lived for 15 years in Fort Smith. He returned to Nodena plantation in 1927. The physician-scientist was a member of the Archaeological Societies of Arkansas, Tennessee and Missouri and the American and British Societies. He was director of the Arkansas Historical Society for many years, and received a golden T given University of Tennessee graduates who have completed 50 years of medical service. He is survived by his wife; two daughters, Mrs. Dixie Durham of Nodena and Mrs. Mary Melody of Little Rock; two sisters, Mrs. J. H. Lovewell and Mrs. Charles Hale, both of Osceola; and two grandchildren.

Dr. H. A. Stroud, a retired physician and surgeon of Jonesboro, died Monday, October 1, 1956, in a Jonesboro hospital. Dr. Stroud attended Peabody College at Nashville, Tenn., and was graduated from the University of Tennessee School of Medicine in 1903. He practiced medicine more than 50 years before he retired several years ago. He had been chief of staff at St. Bernard's Hospital, Jonesboro, and was a past counselor of the Arkansas Medical Society. He was honored by the Arkansas Medical Society recently for 50 years of service. Dr. Stroud was a fellow of the American College of Surgeons, a Shriner, a charter member of the Lions Club, and a member of the Christian Church. Survivors include three sons, Dr. E. J. Stroud, Dr. Paul Stroud and H. A. Stroud, Jr., all of Jonesboro, and a daughter, Mrs. John S. Finch of Corsicana, Texas.

TUBERCULOSIS ABSTRACTS

ISSUED BY THE
NATIONAL TUBERCULOSIS ASSOCIATION

A Note on the Association of Emphysema, Peptic Ulcer and Smoking

By Francis C. Lowell, M.D., William Franklin, M.D., Alan L. Michelson, M.D., and Irving W. Schiller, M.D., The New England Journal of Medicine, January 19, 1956.

This discussion suggests a relation between emphysema, peptic ulcer and smoking and tentatively places a heavy responsibility on the last in the pathogenesis of the first two. In the course of the past eighteen months, 25 patients with chronic obstructive pulmonary emphysema were studied. These patients were unselected and came under observation only because of advanced pulmonary disability. A review of the histories in this group revealed that all had been heavy smokers, and with the exception of one male patient who stated that he had smoked cigars exclusively, all had smoked cigarettes for twenty years or more. Some had stopped smoking when respiratory symptoms developed. A history of smoking has been consistently found in patients with cough syncope, a not unusual concomitant of pulmonary emphysema.

The group comprised 19 men and 6 women, ranging in age from fifty-one to eighty-one years. All complained of dyspnea of three or more years' standing, and, except for 3 male patients with cardiac disease apparently secondary to their pulmonary lesion, none had any recognizable cause for their respiratory symptoms other than the presence of obstructive change in the airway. All had some reduction in the vital capacity and marked slowing of expiration as demonstrated by the expirogram, less than 50 per cent of the vital capacity being exhaled in the first second. The residual volume was 50 per cent or more of the total capacity in all 11 patients in whom this measurement was made. Three patients, all males, in this group had bronchogenic carcinoma. Eighteen patients were treated intensively with steroids, and although symptomatic improvement was clearly induced in 16, none had more than slight or, at best, moderate improvement

in lung function as judged by the expirogram or by more elaborate tests of pulmonary function.

Unfortunately, the criteria by which emphysema, as the term is used here, is to be distinguished from bronchial asthma, have never been clearly established. The distinction can be made. Asthma usually begins early in life, but irrespective of the age at onset, periods of severe dyspnea—associated with a reduction in maximal expiratory rate—tend to alternate with periods of normal or close to normal exercise tolerance and pulmonary function can be restored with intensive and steroid therapy. In the progressive and often ultimately fatal form of obstructive pulmonary disease referred to here as emphysema, there is usually no dyspnea or other evidence of functional impairment of the lung before the age of forty, there is a gradual loss of pulmonary reserve and once respiratory symptoms have become manifest, there are no complete remissions. Finally, the maximal expiratory rate is markedly reduced, an abnormality that can be at best only partially removed by intensive treatment with bronchodilator drugs or steroids, or both. All patients in the group of 25 mentioned above fulfilled these criteria.

Certain features of emphysema can be explained by the assumption that the disease is an inflammatory lesion of the bronchial tree caused by the inhalation of minute irritating particles. The emphysematous patient with dyspnea and obvious obstruction to expiration often has a remarkably silent chest on auscultation. In contrast, the asthmatic patient with dyspnea usually wheezes audibly. In asthma, obstruction may be chiefly in the relatively large noise-producing airways, whereas in emphysema this may be restricted to the terminal portion of the airway. Here, the small caliber of the airway and the low velocity of flow minimize turbulence, the cause of wheezes and rhonchi. Such a distribution of the lesion in the two conditions might arise from a difference in the size of the particles inhaled, those recognized as causes of asthma (pollens, mold spores and dusts) being relatively large and tending therefore to settle out in the larger airways, and those that we believe to cause emphysema (smoke and possible fumes and

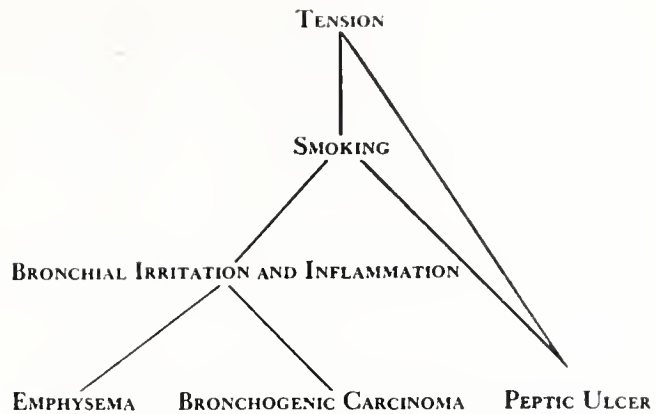
certain industrial dusts presumably acting as irritants) being minute and therefore capable of reaching the periphery of the lung.

We were further struck by the occurrence of peptic ulcer in 6 of the 25 patients with emphysema referred to above, a prevalence of 24 per cent. That this was not mere chance is suggested by other published reports emphasizing such a relation.

An association appears to exist, therefore, between cigarette smoking and emphysema on the one hand and emphysema and peptic ulcer on the other. We believe that the presence of cigarette smoking in this association is best explained as a cause in emphysema and an aggravating circumstance and possibly a cause in ulcer. Such an assumption explains the following: the finding that all of a group of 25 patients with emphysema were cigarette smokers of long standing; the reported description of the lesion in emphysema as inflammation and obstruction of the peripheral and narrow portion of the airway; the widely held opinion that smoking aggravates peptic ulcer; the frequency of peptic ulcer in patients with emphysema; and the occurrence, in the group of 25 patients with emphysema, of 3 cases of bronchogenic carcinoma, a disease for which an association with cigarette smoking appears to have been established.

The quantity and manner of smoking (inhalation) or both may be influenced significantly by the personality of the subject, which is here regarded as having a direct bearing, therefore, on the development of both emphysema and peptic ulcer. A simple schema representing the interrelations herein postulated is as follows: "Tension" is loosely used here to represent a constellation of emotional states and habits ordinarily attributed to those who are anxious, frustrated, ambitious and so forth and who, perhaps because of added factors may be led or pushed to smoke. Relations other than those indicated may also exist—for example, anxiety produced by respiratory difficulty causing or aggravating ulcer.

It is therefore suggested that emphysema and perhaps peptic ulcer as well should be assigned a place along with carcinoma of the lung in the tobacco controversy. Intensive study of this question ap-



pears to be warranted since emphysema as defined above is a disease more common than carcinoma of the lung and has a prognosis almost as gloomy.

PERSONALS AND NEWS ITEMS

Dr. J. C. Young of Jonesboro celebrated his 90th birthday recently with a full day of work at his office. An 1891 graduate of Vanderbilt University School of Medicine, Dr. Young has been practicing for 65 years. He is the oldest proctologist in the nation.

An announcement has been made that **Dr. Jack E. Mobley** has rejoined the staff at the Mobley Clinic in Morrilton as a general surgeon. His father, **Dr. H. E. Mobley**, is senior staff member.

Dr. W. R. Alstadt of Little Rock is the first Arkansas resident to be named president-elect of the American Dental Association. Dr. Alstadt will become president of the ADA in 1957.

MEDICAL CENTER OPENED AT SILOAM SPRINGS. Siloam Springs' new Medical Center was formally opened to the public for inspection Sunday, October 14. The building represents an outlay of approximately \$150,000 and was built for **Drs. James D. Huskins** and **Cal D. Gunter**. **Dr. B. J. Puckett** has his offices there also.

The third annual service in St. James Episcopal Church honoring Texarkana's members of the medical profession and al-

lied healing arts was held Thursday, October 18, at 8 p. m. The service is held on St. Luke's day because tradition says he was a physician. **Dr. Thomas H. Carson**, rector of the church, sent invitations to all physicians, dentists, nurses, medical technicians and pharmacists of that city.

Dr. J. H. Pinson, Jr., was elected chief of the medical staff of Warner Brown Hospital, El Dorado, at the annual meeting held October 16th. Other members elected are **Dr. G. H. Landers**, as vice chief, **Dr. W. S. Rainwater**, secretary, and **Dr. D. E. White**, member of the executive board.

Arkansas physicians made significant contributions to the Golden Anniversary meeting of the Southern Medical Association held in Washington, D. C., November 12-15.

Dr. Sam G. Jameson, **Dr. J. Schuler McKinney** and **Dr. J. O. Cooper** of El Dorado had a scientific exhibit in the field of urology. Dr. Jameson presented a film, "Uretrocystostomy."

"Bleeding Peptic Ulcer" was the subject of a talk on lantern slides by **Drs. Jerome S. Levy**, **Joe H. Hardin** and **Peter O. Thomas** of Little Rock.

Dr. Willis E. Brown of Little Rock spoke as chairman of the section on Gynecology discussing "The Challenge of Gynecology."

Dr. W. E. Knight of Fort Smith collaborated with **Dr. Ralph W. Coonrad** of North Carolina, on a talk on "Use of Pneumatic Tourniquet and Local Anesthesia for Surgical Procedures of the Lower and Upper Extremities."

University of Arkansas School of Medicine alumni held a reunion with cocktails and dinner on Tuesday, November 18th, at the Shoreham Hotel in Washington.

Dr. W. C. Whaley, Jr., has opened a new office in Warren where he will be engaged in the general practice of medicine and surgery.

Dr. and Mrs. T. C. Birdsong, Heber Springs, celebrated their golden wedding anniversary, Sunday, September 30. They were honored at a tea and open house that afternoon at the home of a daughter, **Mrs.**

V. H. Dickson. Dr. Birdsong is the oldest active practicing physician in the county.

Attending the meeting of The American Association of Surgery for Trauma was **Dr. F. Walter Carruthers**, Little Rock. The meeting was held October 4, 1956, at Santa Barbara, California.

Dr. Wassell Returns to Little Rock

A World War II hero has returned to his home in Little Rock to spend the rest of his life near his family. He is **Dr. Corydon McA. Wassell**, 72, retired rear admiral, who gained fame for removing wounded and helpless men from the interior of Java when the Japanese were about to take the island. Dr. Wassell, then 54, was the last American to leave the island.

Dr. Wassell was decorated and publicly commended by President Franklin D. Roosevelt for his feat. His decorations included the Navy Cross.

Novelist James Hilton wrote a book about his life and the novel was made into a movie, "The Story of Dr. Wassell."

MINUTES OF THE COUNCIL OF THE ARKANSAS MEDICAL SOCIETY

So that the members of the Arkansas Medical Society may be better informed on the actions of the Council, the Council has directed that a report of its proceedings be published in the Journal immediately after each meeting.

The Council met on Sunday, October 7, 1956, at 11:00 a. m. in Little Rock. Present were: **Dr. Louis K. Hundley**, Chairman, **Dr. Fount Richardson**, **Dr. J. J. Monfort**, **Dr. James M. Kolb**, **Dr. T. Duel Brown**, **Dr. C. C. Long**, **Dr. R. C. Dickinson**, **Dr. John P. Wood**, **Dr. Wm. B. Harrell, Jr.**, **Dr. W. R. Brooksher**, **Dr. Stanley Applegate**, **Dr. King Wade, Jr.**, **Dr. Perry Dalton**, **Dr. L. H. McDaniel**, **Dr. Alfred Kahn, Jr.**, **Dr. John Wm. Smith**, **Dr. E. Shuffield**, **Dr. Joe Verser**, **Dr. Ross Fowler**, **Dr. Randolph Ellis**, **Dr. H. T. Smith**, **Dr. Hugh R. Edwards**, **Dr. Joe Norton**, **Dr. F. Douglas Lawrason**, Provost of the University of Arkansas School of Medicine, **Mr. Eugene R. Warren**, Society Attorney, **Mr. Edgar J. Fisher**, of the Virginia Council on Health and Medical Care, **Richmond, Virginia**, and **Mr. Paul C. Schaefer**.

FEATURES

A report on the fee schedule covering military dependents medical care which, subject to the approval of the Department of Defense, will go into effect December 8th was received and approved by the Council. The report consisted of the prices of 200 basic procedures from the official nomenclature submitted by the Department of Defense. The pricing was based generally on a \$5.00 unit value applied to the California Relative Value Scale, a generally accepted standard of the relative values of physicians' services. Because the committee did not agree in all cases with the relative value established by the scale, there were numerous deviations from it.

The Council took cognizance of the many long hours and the several trips that the members of the fee schedule committee had given to the work and directed that each member of the committee be personally commended for the work accomplished.

The Council voted to approve the audit report of the Arkansas State Board of Medical Examiners and directed that the balance sheet be published in the Journal. Also read and approved was the audit report of the Board of Examiners of Physical Therapists, and it was directed that this balance sheet also be published in the Journal.

A report from the committee on Medical Legislation, submitted for Dr. King Wade, Sr., recommended the approval of the Constitution for the Arkansas State Medical Assistants Society. After being assured that the Constitution limited membership to those persons employed by members of the Arkansas Medical Society and by hospitals, clinics, and laboratories serving the private practice of medicine, the Council approved its adoption by the medical assistants.

Mr. Edgar J. Fisher of the Virginia Council on Health and Medical Care spoke to the Council outlining the work being accomplished by the Virginia organization.

The biennial budget for the University of Arkansas Medical Center was discussed at length by Provost F. Douglas Lawrason and Mr. Eugene Warren. It was noted that the budget for the ensuing two years will be the largest ever made for the Medical Center. It was brought out in the discus-

sion that in order to take advantage of the full capacity of the new hospital, all of the request will be necessary. Reductions in the appropriation will necessitate operating the University Hospital at less than capacity.

The licensing of physicians who are not citizens of the United States was discussed by the Council. After lengthy consideration, the Council voted against recommending to the Board of Medical Examiners that any changes in the present policies be made.

The winners of the Arkansas State Science Fair are sent annually to the national science fair. The director of the Arkansas State Science Fair requested that the medical society give financial assistance in sending these boys and girls to the national fair. This request was referred to the budget committee for its consideration.

The mental health chairman of the Woman's Auxiliary requested the approval of the Arkansas Medical Society for the Auxiliary to actively support legislation to provide money for the Arkansas Children's Colony. After considerable discussion of the effects of this legislation on other problems of medical society interest before the Legislature, it was decided to approve the Auxiliary's support of the Children's Colony.

In accordance with the House of Delegates action of April 25, 1956, authorizing the entry of an Arkansas candidate for general practitioner of the year, the Council elected the candidate of the Craighead-Poinsett County Medical Society, Dr. J. H. McCurry of Cash. Dr. McCurry's name has been submitted to the Board of Trustees of the American Medical Association who will make the final selection.

The Council authorized the institution of a retirement plan for the headquarters employees.

The Council referred to the Legislative committee a request that the medical practices act be revised to include a statement that the practices of radiology, anesthesiology, and pathology are the practices of medicine.

The Council adjourned at 4:00 p. m.

PROCEEDINGS OF SOCIETIES

Organization of the Pulaski County Academy of General Practices was completed at a meeting in Little Rock. Officers named by the group are: Dr. William A. Snodgrass, Jr., chairman; Dr. Amail Chudy, vice chairman; and Dr. J. W. Smith, secretary-treasurer.

The Pulaski County Medical Society met at the University of Arkansas Medical Center October 2, for scientific and business sessions. Dr. Charles Eckert, assistant professor of surgery at Barnes Hospital, St. Louis, spoke on "The Diagnosis and Treatment of Polyps of the Large Bowel." Brig. Gen. L. Holmes Ginn, Jr., Army Medical Corps, Ft. Sam Houston, Texas, was a special guest.

The Third Councilor District Medical Society, consisting of eight counties in Eastern Arkansas, met Thursday, October 4, in Marianna. Scientific papers were presented by Dr. Richard Logue of Little Rock, Dr. Householder and Dr. Kelly, both of Memphis. The doctors and their wives were entertained at a banquet in the evening. W. G. Hoyle was the after dinner speaker.

At the dinner meeting for the October session of the Pope-Yell County Medical Society, held Thursday, October 11, in Russellville, the organization became a joint member of a committee acting for safety. The program consisted of an eye, ear, nose and throat symposium presented by Dr. Ellis Gardner and Dr. Max Mobley.

The Greene County Medical Association heard Dr. Morris Pasternak of Memphis discuss "Disorders of the Heart Beat" at their regular monthly meeting held in Paragould, October 10. A business session concluded the evening.

The Union County Medical Society at its October meeting adopted a committee report favoring the fluoridation of El Dorado's water supply. The action came when the committee, set up to investigate the

feasibility and safety of fluoridation of the public water supply, made its report.

More than 100 Arkansas doctors attended the 9th annual fall assembly of the Arkansas Academy of General Practice held in the Albert Pike Hotel, Little Rock, October 17-18. Several nationally famous doctors, including the president of the American Academy of General Practice, Dr. J. S. DeTar, participated. Arkansas physicians taking part in the program included Dr. Thomas E. Burrow, Dr. Samuel B. Thompson and Dr. John McCullough Smith, all of Little Rock, and Dr. Joe Verser of Harrisburg, secretary-treasurer of the Arkansas State Medical Board. President of the Arkansas academy is Dr. Ben N. Saltzman, Mountain Home; Dr. W. A. Snodgrass, Jr., Little Rock, is president-elect; Dr. C. C. Long, Ozark, is vice president, and Dr. L. A. Whittaker, Fort Smith, secretary-treasurer.

The Pulaski County Medical Society honored past presidents at a dinner-dance October 18th, in the Hotel Marion, Little Rock. Speaker for the dinner was Dr. Louis Orr, Orlando, Fla., member of the Council of American Medical Association.

The Union County Medical Society presented a South Arkansas Seminar on Trauma in El Dorado, November 10th and 11th. The speakers for the symposium were members of the Department of Surgery of the University of Mississippi Medical Center.

The physicians of the 4th Councilor District, comprised of the counties of Southeast Arkansas, met in Monticello Monday evening, October 22nd, at the Ridgeway Hotel.

Dr. L. K. Hundley, Pine Bluff, Councilor for the District, presided and led a discussion of "Medicare"—regulations by which the Federal Government will furnish medical care to dependent wives and children of uniformed military personnel.

Drs. Gardner Landers and Charles Cyphers, El Dorado, led a scientific discussion of "Treatment of Eye, Ear, Nose and Throat Conditions in General Practice."

About forty doctors and their wives attended the meeting.

FEATURES

Dr. A. H. Maddox Elected to Post

Dr. A. H. Maddox of Paragould was elected president of the First District Medical Society at a meeting in Jonesboro, Thursday, Oct. 11th.

Dr. Gordon Duckworth of Piggott was elected president-elect and Dr. J. H. McCurry of Cash was re-elected secretary.

The meeting opened with the invocation by Dr. L. H. McDaniel of Tyronza, and Dr. Grover Poole, president of the Craighead-Poinsett Medical Society, made the address of welcome. Dr. Gilbert Jay, III, of West Memphis delivered the response.

During the scientific program Dr. James Ettledorf of Memphis spoke on "Jaundice in Infancy"; Dr. Thurman Crawford of Memphis spoke on "Treatment of Less Common Forms of Rheumatic Disease," and Dr. Richard L. DeSaussure of Memphis spoke on "Carotid Artery in Relation to Cerebral Vascular Accidents."

At 7 p. m. the Medical Society and Northeast District Auxiliary held a joint dinner meeting at Hotel Noble.

The after dinner address, "Comments on the Past and Present in Medicine," was delivered by Dr. R. B. Robins of Camden.

CONTRIBUTIONS TO THE AMERICAN MEDICAL EDUCATION FOUNDATION FROM THE STATE OF ARKANSAS

September, 1956

Dr. R. H. Chappell, Wadley Building, Texarkana, Arkansas	\$100.00
Dr. John C. Faris, Jonesboro, Arkansas	20.00
Dr. Elisha M. Gray, Mountain Home, Arkansas	50.00
Dr. Sanford C. Monroe, 1409 Cherry, Pine Bluff, Arkansas	25.00
	\$195.00

ARKANSAS STATE MEDICAL BOARD BALANCE SHEET

June 30, 1956

ASSETS

Cash in Bank of Weiner, Weiner, Ark.....	\$15,160.70
Cash on hand	117.00
Certificate of deposit, Bank of Weiner..	6,000.00
U. S. Government Bonds, Series F (at cost)	1,480.00
Account Receivable—Dr. S. E. Cross	25.00
	\$22,782.70

LIABILITIES AND SURPLUS

Liabilities

Withholding and social security taxes deducted in the quarter ended June 30, 1956	\$ 166.80
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Custodial Account

Arkansas Physical Therapists Board	248.35
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Surplus

Balance, June 30, 1955	\$19,718.41
Add: Excess of receipts over disbursements for the year ended June 30, 1956	2,649.14
	22,367.55
	\$22,782.70

ARKANSAS BOARD OF PHYSICAL THERAPY EXAMINERS

BALANCE SHEET

June 30, 1956

ASSETS

Equity in the assets of the Arkansas State Medical Board	\$248.35
	\$248.35

LIABILITIES AND SURPLUS

Liabilities

None	\$.00
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Surplus

Balance, June 30, 1955	\$103.35
Add: Excess of receipts over dis- bursements for year ended June 30, 1956	145.00
	\$248.35
	\$248.35

IN MEMORY OF DR. JAMES K. HAMPSON

Dr. J. H. McCurry, Cash, Arkansas

More than half a century ago Dr. Hampson and myself were in medical school together, seeking knowledge to enable us to render the best of service to suffering humanity.

It was said of Dr. Hampson that he was the most versatile student in the school. I remember him as such and had a great admiration for his knowledge and ability. While there is sadness to think of the friend who has passed on, there is also a joy, an assurance and a comfort given to each of us the promise and the hope of life everlasting.

Death is a wonderful part of the great mystery of life, and when we come to fullness of years should we not accept it as a welcome release?

Rather than to view the close of life with pessimism let us consider the good estate of him who has finished his life's work and is through with the struggle and care incident to all human life, as well as those heavy burdens which it is the lot of the physician to carry.

There is sadness in our hearts as we remember the many deeds of kindness to humanity by Dr. Hampson. The life he lived, the services he gave have kindled in our hearts those fires that shall continually glow perpetuating his memory and work.

While there is sadness as we think of the friend, husband, and father who has passed on, there is also a joy, an assurance, and a comfort because of the trust he had in Christ.

Woman's Auxiliary

The Northeast District Meeting of the Ladies Auxiliary to the Arkansas Medical Association was held October 11, 1956, at the Hotel Noble in Jonesboro. Guests were Mrs. L. Gardner, President, Women's Auxiliary; Mrs. Jack Kennedy, President-elect; Mrs. J. J. Monfort, Civil Defense Chairman, and Mrs. Mason Lawson, Immediate Past President of the national auxiliary.

The Auxiliary to the Crittenden County Medical Society met Tuesday, October 16, at the West Memphis Country Club for a business meeting and luncheon. Guest speaker was Dr. T. Murray Ferguson of West Memphis.

The women's auxiliary to the Garland County Medical Society met Monday, October 15, at the home of Mrs. D. B. Stough in Hot Springs. It was the first meeting of the new year, with Dr. Louis R. McFarland as the guest speaker.

The Pulaski County Medical Auxiliary was host to the Southeast Arkansas District of the Woman's Auxiliary of the Ar-

kansas Medical Society and wives of general practitioners attending a meeting in Little Rock at a luncheon meeting and style show held at the YWCA on October 17th.

Mrs. L. Gardner, president of the Auxiliary to the Arkansas Medical Society, was program speaker at the November meeting of Sebastian County Auxiliary. Hostesses for the meeting, a luncheon in the Colonial Room of the Goldman Hotel in Fort Smith, were Mrs. A. S. Koenig and Mrs. Louis Lambiotte.

Sevier-Polk County Medical Auxiliary were hostesses at a luncheon honoring Mrs. Gardner in October at Little River Country Club. Mrs. Gardner explained current projects of the state organization. Autumn colors were used in the decorating theme. Members and guests were present from Glenwood, Murfreesboro, Mineral Springs, Nashville, Lockesburg, Horatio, Mena and DeQueen. Mrs. Charles N. Jones is president of the Auxiliary.

This year's quota for the Woman's Auxiliary to the American Medical Association to the American Medical Education Foundation is \$140,000. Last year the Auxiliary gave \$106,000.

This year a new committee has been added in Auxiliary: Safety—Traffic and Home. The slogan is "Heed, Not Speed." The Auxiliary baby-sitter program called "Gems" (good emergency mother substitutes) is also being stressed.

BOOK REVIEWS

Histamine: A Ciba Foundation Symposium. Edited by G. E. W. Wolstenholme, O.B.E., M.A., B.Ch., and Cecilia M. O'Connor, B.Sc. Pp. 472; illustrated. 1956. Little Brown and Company, Boston. \$9.00.

This book presents a group of symposia on the pharmacological and physiological action of histamines in the human body. Therein is discussed its origin, its use and distribution, and its fate. The data is collected from authorities in many countries and the various laboratories. These pages present the latest in development and in theory of histamine as it concerns medicine and they will offer new vistas to the serious student of the subject. Fount Richardson, M.D.

FEATURES

The Morphology of Human Blood Cells: L. W. Diggs, M.A., M.D., Professor of Medicine and Director of Medical Laboratories, University of Tennessee and City of Memphis Hospitals; Consultant in Hematology, Armed Forces Institute of Pathology, Washington, D. C.; Dorothy Sturm, Instructor, Memphis Academy of Arts; Ann Bell, B.A., Instructor in Medicine, University of Tennessee. Pp. 181; illustrated. 1956. W. B. Saunders Company, Philadelphia. \$12.00.

This atlas of human blood cells is chiefly a text for students of hematology either as medical students or as laboratory technicians. It is concise, well indexed for ready reference, and a brilliant resume of present studies of both normal and pathological blood. The plates are most frequently indexed on the opposite page so that the references are easily identified. They are many (31), and afford a quite complete reference for the morphological study of blood cells. Biographical references are few.

The type is large and legible. It is printed in loose-leaf, with a hard board binding, and the plates are examples of color printing at its best.

Fount Richardson, M.D.

Textbook of Medical Physiology: Arthur C. Guyton, M.D., Professor and Chairman of the Department of Physiology and Biophysics, University of Mississippi School of Medicine. Pp. 1030; illustrated. 1956. W. B. Saunders Company, Philadelphia. \$13.50.

The book presented is first and last, a textbook for medical students. As such it contains the elements of physiology, the more recent theories, hypotheses and functions of the various cells, systems and senses of the human body.

In the course of his discussions Dr. Guyton has included numerous excursions into pathologic physiology, and as a result he made his book much richer to the physician reviewing his studies, as well as to the second-year medical student. Except for the above digression, the subject is clearly portrayed and there is a studied attempt to avoid controversial material as much as possible. Where it has to be presented it is done hypothetically so that the student may clearly distinguish the factual from the theoretical.

The chapter on the physiology of the special senses is of immense value to the practitioner who has been away from medical centers for some time. This section alone makes the book worth while.

F. R.

Ageing in Transient Tissues: Ciba Foundation. Published by Little, Brown and Company, Boston and Toronto, Volume 2, price \$6.75.

The second volume of Ciba Foundation's Colloquia on Ageing, entitled "Ageing in Transient Tissue," was published from the presentation of papers read and discussed at the second Colloquium on Ageing, July fifth and seventh, 1955, with Professor E. C. Amoroso chairman. Twenty-seven noted authorities from America and Europe participated in presentation of papers and subsequent discussion. This volume contains two hundred

fifty-six pages with ninety-six excellent illustrations and photomicrographs. The papers are presented in chapter form, numbering seventeen, and are concluded by open discussions by the members of the conference. "Ageing in Transient Tissue" as the title might infer, deals with the problem of ageing of cellular matter, whose life expectancy under normal circumstances does not exceed that of the whole organism. The material presented represents recent experimental data concerned with the senescence of such tissues as apocrine sweat glands, placenta, the erythrocytes, and reproductive organs. Several chapters are devoted to the subjects of cortisone and somatotrophic hormone effect on foetal growth and development.

The book as a whole would be of extreme interest to the Obstetrician and Gynecologist, in view of some of the more revealing and interesting results obtained from the experimental data regarding the cyclic changes noted in the ovary and degenerative as well as the organic functions of the placenta. Experimentally there is evidence to show that the ovary is more senescent in its ability to produce oocytes and to continue its hormonal secretory activity after senescence than the testicle's capacity of regenerative powers in regard to germinal and secretory functions. Data presented lends evidence to the fact that the number of oocytes increase to the age of puberty at which time there are a fixed number of oocytes. Many authors have stated that the termination of pregnancy is due to regressive changes in the placenta, and due to this senescence the placenta is unable to supply proper nutrients to the foetus. Experimentally numerous degenerative changes and loss of functions are noted; however certain functions become more efficient as gestation progresses and as stated by Dr. Huggett the placenta is "abruptly expelled in the prime of life." In view of this, labour may be induced by the increased demands of the foetus, rather than the decreased capacity of the placenta to supply. Several chapters are devoted to growth and development as influenced by hormones. The somatotrophic hormone experimentally does not produce gigantism in rats administered in the prenatal or postnatal periods. Cortisone when used in the prenatal rat produces a frail, immature offspring which rarely survives ten or more days.

It was the hope of the Colloquium and the text of the book to shed some light in a general nature on the problem of wear and tear of senescence.

Frank M. Bauer

The Recovery Room: Max S. Sadove, M.D., Professor of Surgery (Anesth.) and Head, Division of Anesthesiology, University of Illinois College of Medicine and the Research and Educational Hospitals; James H. Cross, M.D., Clinical Assistant Professor in Surgery, University of Illinois College of Medicine. Pp. 565. W. B. Saunders Company, Publishers, 1956.

The 1st, 2nd, 3rd and 21st chapters of this book deal with the Recovery Room. The other chapters are superfluous. The four mentioned chapters are well written, informative and discuss a wide variety of problems encountered in the Recovery

FEATURES

Room. This makes this book invaluable to those who are now working in this field, or those who are contemplating a Recovery Room or, are developing rapid treatment centers in their institutions. The part not dealing with Recovery Rooms could well have been omitted or perhaps better included in a separate book: Pre & Post Operative Care. Some of the material in these chapters appear to be redundant. One gains the impression that the authors of chapters five through twenty are not experienced or acquainted with the fine program

of Recovery Room management that is outlined in the first three and last chapters.

This is one of the first books relating to the title that has been published. M. J. Segall, Dr. Sadove, Dr. Cross and Rose Milone, R.N., demonstrate in their sections of the book, cognizance of the many problems which confront the Surgeon, the Anesthesiologist and the Recovery Room Nurses.

An excellent index is appended to this volume.
Joseph P. Hickey, M.D.

The JOURNAL

OF THE ARKANSAS MEDICAL SOCIETY

PUBLISHED MONTHLY UNDER DIRECTION OF THE COUNCIL

Volume 53

JANUARY, 1957

Number 8

Chest Injuries: Their Physiology And Management**

WATTS R. WEBB, M.D.*

With the rapid increase of high-speed motor travel, thoracic injuries are becoming much more prevalent and are seen almost as frequently in a small community along the public highway as in the accident room of a large city hospital. Thus all practitioners, regardless of their special interests, should have some knowledge of the physiology and of the disturbed cardiorespiratory dynamics of thoracic injuries. Except for these specific physiologic considerations, thoracic injuries are handled the same as trauma of any other region of the body. They are unique in that massive trauma treated by proper conservative measures may give excellent results while mild injuries improperly treated may lead to disaster.

PHYSIOLOGY

Impaired respiration can best be considered in three aspects: (1) the tracheobronchial tree, (2) the chest wall, and (3) re-expansion of the lung.

The airway may be blocked by a swallowed tongue, aspirated vomitus, blood, mucous, or increased secretions. The bronchial secretions are increased by anoxia or forceful respiratory efforts and are manifested by a hacking wet cough and dyspnea. If there is an effective cough from pain or chest wall instability, this "traumatic wet lung" persists and enhances the anoxia.

A sucking wound of the chest wall allows air to be drawn into the pleural cavity to produce a tension pneumothorax. If a wound is wide open, the mediastinum shifts back and forth with each respiration and prevents adequate cardiac filling through partial obstruction of the great veins. Multiple fractures produce a "flail" chest allowing the instable segment of chest wall to be pushed out on expiration and sucked in during inspiration, thus militating against both adequate ventilation and cardiac filling.

The lung itself if partially collapsed by air, blood or other substances within the pleural cavity obviously cannot ventilate efficiently. Any anoxia begets anoxia as it produces pulmonary edema. Likewise, pain from fractured ribs or other injuries prevents adequate respiration or coughing and thus augments the anoxia.

The resuscitative phase is devoted to immediate restoration of the normal physiology and the prevention of infection. The tracheobronchial tree is cleared, chest wall pain and instability are relieved, accumulations in the pleural space removed and attention given to any possible hemorrhage, cardiac tamponade or contusion, and associated injuries. Shock is not commonly seen in chest injuries unless there is severe bleeding or contamination of the pleural or peritoneal spaces with bowel content.

The diagnosis can usually be made from the history and physical examination and should always include PA and lateral

*From the Department of Surgery, University of Mississippi Medical Center, Jackson, Mississippi.

**Presented to the Symposium on Trauma at El Dorado, Ark., November 10-11th, 1956.

X-rays of the chest. In addition, because of the very frequent association of abdominal injuries and acute gastric dilatation or paralytic ileus an abdominal film should be taken.

TREATMENT

First aid measures that can be rendered without any special equipment or by the trained layman include: (1) Maintaining the patient in a sitting position when not contraindicated by other injuries, (2) Closing the sucking wound. This, of course, is done with shirt tail, coat or anything else available. By holding the wound closed manually during inspiration and opening it during a forceful expiration it is possible to evacuate the chest of several hundred cc. of fluid or air. (3) Support the flail chest so that the patient may cough and breathe. (4) Encourage coughing.

DEFINITIVE TREATMENT

This, of course, includes all the general measures used for any trauma such as antibiotics, oxygen, tetanus toxoid or antitoxin as indicated, and the rather cautious administration of fluids. While blood loss must be replaced, excessive fluids in the presence of pulmonary injuries easily may lead to pulmonary edema.

The airway may be kept clear by encouraging coughing, aspiration of the tracheobronchial tree with a catheter, by bronchoscopy, or if none of these are availing by tracheotomy. The tracheotomy should be utilized early rather than reserved for the terminal patient. It affords a convenient route for tracheal aspirations and, by removing the resistance of the larynx and diminishing dead space, markedly reduces respiratory effort. Open injuries of the subglottic larynx or trachea may allow air to dissect into the mediastinum to produce mediastinal emphysema or into the pleural cavity for a tension pneumothorax. Mediastinal emphysema from this source can be prevented by a tracheotomy, for once the resistance of the larynx is removed the pressure in the trachea is insufficient to force air out into the mediastinum.

The external wound should be debrided as early as possible, the pleural space closed with a pleuromuscular closure only and left for secondary closure at a later date. Ex-

cept for a few specific instances, the initial wound surgery should be conservative and not be extended into a formal thoracotomy for removing foreign bodies, suturing lung, etc., until the golden period 4 to 10 days after injury when the mortality and morbidity will be much less.

Rib fractures will always heal regardless of treatment but nonetheless should not be underestimated. One fractured rib in an elderly patient may cause sufficient respiratory splinting to result in an obstructive atelectasis and fatal pneumonia. The pain is preferably controlled by injection of the intercostal nerves for two ribs above and below the fracture site. The flail chest can be handled by passing a towel clip or sterile wire around the central portion of the flail segment and attaching this to an overhead pulley with five pounds of traction. If this is not effective, the patient may be placed in an iron lung or given intermittent positive pressure respiration, preferably through a tracheotomy.

Early re-expansion of a lung is usually prevented by a hemothorax or pneumothorax. The tension pneumothorax may develop from a laceration in the lung or bronchus or from a sucking wound. Immediate emergency treatment consists of thoracenteses but if air continues to accumulate the needle should be replaced by catheters attached to water-seal drainage systems. The hemothorax is one of the most common injuries and may dangerously reduce the vital capacity as well as the blood volume. Repeated thoracenteses will effectively evacuate the majority of hemothoraces.

WOUNDS REQUIRING IMMEDIATE OPERATION

(1) Persistent air leaks that cannot be handled by several intercostal catheters will likewise require an immediate thoracotomy. Usually lung leaks will seal and continued air leakage suggests an injury to one of the larger bronchi.

(2) Persistent bleeding is most frequently from an internal mammary or intercostal vessel. Wounds of the hilar vessels or heart if massive usually produce death before the patient can be seen by a physician. Wounds of the heart if not immediately fatal may have a slow leak to produce cardiac tamponade. This may be recognized by the syndrome of an elevated

venous pressure, a lowered arterial blood pressure with a low pulse pressure, a slow pulse out of keeping with the hypotension and a quiet heart on fluoroscopy. Sub-xiphoid aspirations may be all that is required. However, one should be prepared for an immediate thoracotomy as a rapid recurrence demands early operative closure of the heart.

(3) Esophageal injuries fortunately are rare and at times difficult to prove. The patient may note non-specific substernal discomfort which is accentuated by swallowing. A Lipiodal swallow, esophagoscopy or just the passage of a gastric tube may be of aid in the diagnosis. In general, any perforation of the esophagus by external trauma should have an immediate layered closure and transpleural drainage. Any continued spillage, which always contains the anaerobic and fusospirochetal bacilli from the mouth, will be followed regardless of antibiotic therapy by a fulminating mediastinitis and usually an empyema. Very minimal esophageal injuries, which under close supervision show no evidence of air or fluid leakage, may be handled by carrying the patient on broad spectrum antibiotics and nothing by mouth.

(4) Thoraco-abdominal wounds are most serious and carry a mortality rate of about 35 per cent. Operation is indicated as soon as the patient can be resuscitated. Most of the upper abdominal viscera can be repaired through a diaphragmatic extension of the thoracic incision. However, where feasible, the chest should be managed conservatively and the abdomen approached through a laparotomy. Here it must be remembered that, with the abdomen open, the diaphragmatic defect constitutes a sucking wound and requires intermittent positive pressure respiration.

Diaphragmatic hernias are frequently seen following closed trauma with either a rent being torn in the dome of the diaphragm or more rarely the muscular attachments ripped loose from the costal margin. All hernias should be repaired as early as possible due to the frequency of strangulation of the herniating viscera. Diagnosis can be made by the passage of a gastric tube, a barium enema or just by the auscultation of bowel sounds in the chest.

The possibility of a ruptured spleen should always be kept in mind as this is a frequent complication of severe trauma to the lower chest.

NONOPERATIVE LESIONS

Contusion of the heart represents a severe bruise with extravasation of blood throughout the interstices of the myocardial fibers. This pressure causes local anoxia and edema and physiologically very closely resembles a myocardial infarction. It should be suspected anytime a patient has a rapid pulse and respiration out of keeping with his general condition otherwise. The electrocardiogram may show non-specific changes and this patient should be treated exactly as if he had a myocardial infarction.

Pulmonary contusions and blast injuries produce patchy hemorrhages into the alveoli and interstitial spaces of the lung which on X-ray appear as multiple areas of consolidation with irregular fuzzy edges. Surgical intervention in such cases is meddling and dangerous. The enormous recuperative power of the lung is not generally appreciated but these lesions treated by conservative measures will clear to leave an excellent functional unit.

Acute gastric dilatation and paralytic ileus are common complications of thoracic injuries particularly where there are associated injuries of the spine or retroperitoneal hemorrhage. The patient with forceful respirations tends to hold open the superior constrictor muscle of the esophagus and suck air down into the stomach. Treatment is continuous gastric suction.

DELAYED OPERATIONS

Foreign bodies are removed during the golden period 4 to 10 days after the time of injury. During the conflict in Korea it was found preferable to remove any foreign article measuring more than 1 cm. in any diameter because of the danger of persistent infection, abscess formation and delayed hemorrhage. In general, any foreign body visualized within the mediastinum or heart should be removed regardless of size.

Surprisingly, traumatic rupture of a main stem bronchus very seldom *per se* produces a tension pneumothorax or severe

symptoms. Apparently at the moment of severe impact the bronchus is sheared in two by compression between the anterior chest wall and vertebra. The completely atelectatic lung does not become infected and function may be restored even years later by re-anastomosis of the bronchus, though early repair is always preferable.

About 15 to 25 per cent hemothoraces will proceed to clot in spite of diligent thoracenteses. In many cases the blood may be liquefied by enzyme preparations such as streptokinase or trypsin. However, after about three weeks there develops around the periphery of the clot mature living fibrous tissue which with time continues to increase in firmness and thickness. Thus, even though the enzymes may liquefy the contents, this living peel prevents expansion of the lung and maintains a potential empyema space. Decortication with re-

moval of the peel is curative. It is easiest technically from the fourth to the sixth week.

SUMMARY

In resuscitation, one should think of restoring the deranged physiology by (1) maintaining the patency of the airway, (2) restoring the integrity of the chest wall, and (3) re-expanding the lung. First aid consists of transporting the patient to a sitting position, closing the sucking wound, supporting the chest and encouraging coughing. Early operation is indicated for open wounds, massive leakage of air or blood, esophageal injuries, diaphragmatic hernias, thoraco-abdominal injuries and certain cardiac injuries. One should seek to avoid operation in cardiac or pulmonary contusions. Most other conditions may be handled by nonoperative methods or delayed thoracotomy.



Abdominal Trauma**

J. HAROLD CONN, M.D., F.A.C.S.*

Abdominal wounds are divided into penetrating and non-penetrating. The non-penetrating may involve only the abdominal wall, or they may be sub-parietal, which simply means intra-peritoneal injury without perforation or penetration of the abdominal wall. This type of injury causes the highest mortality and requires the most astute surgical judgment in management. It is often not until shock and hemorrhage and even peritonitis have become established, that the possibility of intra-abdominal trauma is suspected (5). The matter of surgical judgment is not nearly so important in penetrating and perforating wounds of the abdomen because they automatically carry with them the decision to

operate, as soon as the patient is evaluated and resuscitated sufficiently. These measures can be carried out concomitantly, and are begun immediately on admission of the patient to the hospital.

A detailed history of the injury is obtained, and as thorough a physical examination is made as the condition of the patient warrants. The possibility of associated injuries must always be considered. Necessary roentgenograms and laboratory procedures should be obtained. Although the emergency nature of the treatment should be realized, time spent in preoperative resuscitation and proper evaluation of the patient is essential.

The most important factor in mortality from abdominal trauma is not the time lag from initial wounding to operation, but the length of time the patient is in shock (3).

*Chief, Surgical Service, Veterans Administration Center, Jackson, Miss.

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Shock measures must be begun immediately, particularly the restoration of diminished circulating volume initially by plasma volume expanders such as Dextran while cross-matching for whole blood transfusion is proceeding. We have not used lyophilized blood plasma for several years because of the high incidence of homologous serum jaundice. However, if liquid plasma is stored for several months at room temperature, the virus is supposedly eliminated. One caution in using Dextran, if over 1000 cc. of this material is given, a bleeding tendency may become manifest. Also, there may be difficulty in cross-matching for blood transfusion. Whole blood, of course, must be given and given in adequate amounts to replace blood lost. The use of whole blood, probably more than anything else, may be credited with the really significant reduction in mortality from serious trauma since the onset of WW II. Bacterial contamination of the peritoneum is much less significant since the advent of really effective antibiotics and chemotherapeutic agents.

It is extremely important to recognize the occasional patient who either because of continuing profuse hemorrhage or overwhelming peritoneal contamination does not respond adequately to resuscitative measures and must be operated upon at once. Too much time should not be spent in trying to achieve a certain blood pressure reading for operation, if the patient is obviously not responding to what should be adequate treatment.

All patients, regardless of whether they have eaten recently or not, should have a Levine tube passed into the stomach and all gastric contents aspirated. This not only removes material which might be aspirated during anesthesia, but also serves as a diagnostic measure, as presence of blood denotes upper GI injury.

The type of physical force is important in diagnosing all abdominal trauma. Subparietal injury may show no external evidence except for generalized tenderness. The exact location of wounds of entrance and exit should be noted. Missiles entering the back, buttocks, chest, perineum, and even the lower extremities may traverse the abdomen. In GSW the position of a

retained missile on X-ray is of value in determining its path.

The early picture of intra-abdominal visceral injury is a silent, tender abdomen with rigidity, depending on amount and character of escaped contents. Absence of peristaltic sounds is not an absolute indication of visceral injury, as ileus may be produced by injury to the lower thoracic cage, spine, or bony pelvis (5). Hematuria, microscopic or gross, or blood on digital examination of the rectum, strongly supports GU and lower GI tract injury respectively. X-ray examination of the abdomen, upright and flat, may show free air indicating perforation of stomach or colon. Perforation of the jejunum or ileum will not show air, as these parts of the GI tract do not ordinarily contain enough gas to be demonstrable. Perforations of the duodenum may show free retroperitoneal air outlining the psoas muscle shadow.

Even after careful observation a diagnosis of visceral injury may be uncertain. However, if there is the slightest suspicion, abdominal exploration is mandatory, even though it may be negative. Such a policy will obviate the hazard of prolonged observation in the patient with a perforated viscus (3).

OPERATIVE MANAGEMENT

In general, endotracheal ether is the anesthesia of choice or cyclopropane in the hands of a trained anesthesiologist, particularly if the patient has been in shock, as these patients do not stand spinal or pentothal curare type anesthesia well. The endotracheal tube permits positive pressure for associated thoracic injuries and facilitates aspiration of tracheo-bronchial secretions.

The incision should be placed over the area of suspected injury; usually a mid-paramedian incision is best as it can be extended for adequate exposure in any direction. The exploratory incision should be placed so that it will not traverse a wound of entrance or exit. These wounds are properly debrided following closure of the abdominal exploratory incision.

Upon opening the peritoneum, a careful systematic examination of all viscera should be accomplished, incising perito-

neal reflections if necessary. The control of hemorrhage should receive first consideration. The most likely sources are spleen, liver, and the mesenteric and retroperitoneal vessels. Wounds of the spleen should not be repaired, but splenectomy done because of the high incidence of secondary hemorrhage. Retroperitoneal midline hematomas should be investigated, because bleeding from rents in the large midline vessels may occur following restoration of normal blood pressure or movement of the patient (7). The vessels should be controlled by tapes above and below, the hematoma removed, the rent in the vessel wall visualized and repaired. Hemorrhage of the liver may be difficult to control. However, packing with gauze should not be done except as a last resort, as it may cause pressure necrosis of liver tissue, introduce infection, and result in secondary hemorrhage on removal (6). Material such as gelfoam or oxidized cellulose gauze should not be interposed between two liver surfaces, as it has been shown that the rate of absorption of these substances is slower than primary healing of liver tissue, so they may act as a foreign body, a nidus of infection, and a cause of secondary hemorrhage (2, 4). Simple suture is ineffective except for small lacerations because of the difficulty of suturing friable liver tissue. Of course, bleeding may be controlled temporarily by inserting the index finger into the foramen of Winslow and compressing the hepatic artery and portal vein with the thumb. Recent experimental work on liver injury in dogs has shown that hemorrhage can be controlled completely with the actual cautery, which also apparently seals the bile canaliculi, as there was no evidence of bile leakage or peritonitis postoperatively (1). It is extremely important that liver wounds be adequately drained, because of the danger of bile leakage and bile peritonitis.

All injuries of the gall bladder except for minor rents require cholecystectomy. Lacerations of the common duct should be closed over a T-tube. Complete severance of the common duct can usually be repaired by meticulous end-to-end anastomosis. One horizontal limb of the T-tube should extend through the anastomosis, the vertical limb being brought out of the

duct through a separate incision. Wounds of the pancreas usually require only drainage. However, extensive lacerations may require interlocking mattress sutures of non absorbable material.

Wounds of the stomach rarely require resection, and may be closed transversely with two layers of interrupted silk sutures. The lesser sac should always be opened to examine the posterior surface of the stomach. This is one of the most commonly overlooked areas where perforations may occur, with disastrous results. Also, the posterior surface of the duodenum should be inspected carefully, particularly if there are collections of bile or blood in this area. The peritoneum should be incised laterally and the duodenum reflected medially. Perforations of the posterior wall of the duodenum should be meticulously closed in two layers, and drainage instituted, as duodenal fistula has a high morbidity and mortality.

The small bowel with its mesentery should be examined carefully from the ligament of Treitz to the ileocecal junction. Small perforating wounds may be closed with a silk pursestring suture. Larger wounds should be closed transversely so as not to decrease the size of the bowel lumen. Multiple wounds involving a segment of small intestine or areas of devitalized bowel should be resected with primary end-to-end anastomosis. Wounds of the small bowel should never be exteriorized because of severe nutritional and electrolyte depletion.

Extensive damage to the cecum and ascending colon may require resection and primary ileo-transverse colostomy, with Miller-Abbott tube decompression. Since WW II there has been controversy over the treatment of wounds of the large bowel. During that war it was mandatory for the Armed Forces to exteriorize all wounds of the colon (7). However, with adequate antibiotic coverage, increasing civilian experience has shown that selected wounds may be sutured primarily without exteriorization with less mortality and far less morbidity. Extensive involvement or devitalized bowel which may seem to require resection and primary anastomosis probably should be treated by exteriorization (3). The one area of the large bowel

in which there is no controversy concerning colostomy is the extraperitoneal rectum. These wounds all require a proximal defunctionalizing colostomy, suture of the bowel wall if feasible, and drainage of the presacral space through a post-anal incision.

POSTOPERATIVE MANAGEMENT

Postoperatively these patients should be observed carefully, particularly for secondary hemorrhage, infection, and pulmonary complications.

Naso-gastric suction should be continued until all evidence of ileus has subsided, peristalsis is restored, with passage of flatus or feces.

Appropriate antibiotics should be administered.

All perforating and penetrating wounds should receive tetanus prophylaxis.

An effective stir-up regimen should be instituted with frequent naso-tracheal suction to guard against pulmonary complications.

Parenteral fluid therapy is controlled by accurate measurement of intake and output.

Electrolytes lost by drainage should be carefully replaced, along with giving adequate calories by the administration of 10% sugar solutions and protein hydrolysates.

SUMMARY

The mortality from acute abdominal trauma has been decreased markedly, primarily by a more successful treatment of shock, by initially using plasma volume expanders, and definitively by adequate whole blood transfusion. The spectre of peritonitis and infection has been greatly minimized by effective antibiotic and chemotherapeutic agents. Better postoperative care has further reduced mortality due to pulmonary and wound complications. Proper regulation of fluids, electrolytes, and nutrition has contributed greatly to a lessened morbidity and mortality in these severely injured patients.

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Medical-Dental Relations

W. R. ALSTADT, D.D.S.

PRESIDENT-ELECT, AMERICAN DENTAL ASSOCIATION

LITTLE ROCK, ARKANSAS

FOREWORD

Medicine and Dentistry — two great Health Professions — with one goal — the total well being of each individual patient.

There are approximately 97,500 (89,000 active) dentists in the U. S. and there are approximately 225,000 (205,000 active) physicians in the U. S. Medicine has 82 approved schools. Dentistry has 44 approved schools plus two new schools which were opened this fall. Medicine has 23 specialty boards. Dentistry has 7 specialty boards.

Both professions have headquarters in Chicago, and both professions have branch offices in our nation's Capital.

While we have separate schools (although much of our basic science instruction is the same), separate examining boards, and separate professional organizations, our moral and professional obligations are the same. To me, the following quotation is apropos of the Medical and Dental Professions:

General Robert E. Lee once told his son — "Duty is the sublimest word in our language. Do your duty in all things. You cannot do more. You should never wish to do less."

The public is the one to judge whether we do our duty or not; even though I am biased in my judgment, I honestly believe that the overwhelming majority of physicians and dentists accept their moral and professional responsibility in a very commendable manner.

MEDICAL-DENTAL RELATIONS

The utmost cooperation of the dentist, the physician and the surgeon is often necessary for the welfare of the patient. The time has now come when each respects the other's training, his ability, his sincerity, and his desire to cooperate for the best interest of the patient.

Presented November 6, 1956, before Staff Meeting of Boone County Hospital (Harrison) and visiting physicians and dentists.

Medicine and dentistry are the most closely allied professions, not only in the health field, but of all the professions. Stop and think, if you will, that we have a peculiar type of life's work. All other businesses and professions have the purpose of attempting to create things, whereas our purpose is to attempt to *prevent* things, particularly the occurrence of disease or illness in any form.

As we know, dental caries is the most prevalent disease of all mankind, because 95 per cent of the people are afflicted at one time or another. Although dental caries is not as dramatic as many of the medical diseases, there is no question but what dental disorders contribute directly and indirectly towards many systemic disorders.

While our very heritage and our tradition proves that we have lived closely together, there is no doubt but what we must continue to live more closely together in the future. I say that not only because it is our moral responsibility to protect the health of the public, but frankly, it is also necessary for our own survival as free enterprising health professions.

I well remember several years ago when the Wagner-Murray-Dingell Bill was being pushed so very hard by the New Deal thinkers — and I was on the Legislative Council of the American Dental Association at the time — that Senator Murray of Montana offered to omit the dental profession from this socialized scheme, if we wished to be omitted. We told him and the other sponsors that we would cast our lot with the medical profession, and would not be a party to weakening its stand nor our stand in this matter. As we all know, this plan was not adopted. I am telling you quite frankly that we are being socialized daily, but rather than it being done by one big bite, it is being done in small bites. I make the prediction to you that we will not recognize medical and dental practice within the next ten years as it exists to-

day. If you will stop and think, you will readily agree that our practice has changed considerably during the past ten years.

In my opinion, some of this so-called "progress" is good and some of it is bad. Regardless of whether it is good or bad, it is continuing, and I would urge that each one of us think seriously and take positive action towards safeguarding our wonderful professions. The following plans and programs present problems which I think will explain my concern:

1. The \$15 billion labor-management welfare funds with their promises of *all* health services as fringe benefits. These involve both open and closed panel programs.
2. The giant inpatient and outpatient care programs of the Veterans Administration and the prevalent attitude of many veterans that they are entitled to "something for nothing."
3. The growing expansion of Blue Cross-Blue Shield programs.
4. The trend in big industry for management to provide medical and dental services through company-employed physicians and dentists.
5. The recent U. S. government report of a "Model Plan for National Health Insurance."

All of these plans, it should be noted, are based upon fixed fee scales.

Time does not permit me to go into detail in regards to these plans, but I believe that you will agree with me that medicine and dentistry should and must cooperate even closer than ever before in meeting and solving the problems presented by these plans.

I receive the News Letter of the American Medical Association, and it is interesting to note last year the A.M.A. spent \$207,227 for the expenses of the Washington office (Legislative Lobbying). While that is approximately \$1.00 per member of the A.M.A. membership, certainly it is well spent. The dental profession, too, maintains a Washington office, and while our budget is not that high, certainly it must be kept informed of the trends in

government. In dentistry alone, we have over 200 bills in Washington annually affecting the dental profession. Medicine has many more than we. Think of the number of bills in individual states and you'll see we must be united and on guard. Some are direct, some are indirect, but you can see that the trend is towards *more* control not *less* control of our professions.

As I said, we do live together on a national level. For example, we are together on practically all federal legislation, because each profession well recognizes the fact that while we have individual problems, basically our problems are the same.

Our two great professions are united against the continuation of the armed services draft of physicians and dentists. Our two great health professions have cooperated wonderfully well in selective service advisory boards, which as you know, was made up in each state of the health officer of the state, one physician representing the medical association, and one dentist representing the dental profession.

Our two great professions are united in supporting the Reed-Keogh Bill which is in attempt to set up self-retirement plans. The dental profession, after 7 years of battling, lost only this year in its opposition to being included in the Old Age and Survivors Insurance program of the federal Social Security Act. In my opinion, the medical profession will have this phase of federal social security thrust upon you the next time the law is opened. You know, of course, that both major political parties support this philosophy.

Our two great professions are together on community planning, whether it be on indigent care, on sanitation procedures, or whatever the problem may be.

We are living together today more and more in the hospitals, which certainly is commendable. The general hospital fast is becoming the health center of the average American community, and dental care in the hospital is taking on increasing importance. Twenty-five years ago only the larger cities boasted specialized professional personnel capable of staffing a hospital in most of the then-existing specialties in medicine.

Those hospitals that were in the major population centers and that, in addition, were associated with teaching institutions furnished the educational facilities for undergraduate as well as postgraduate or graduate learning. At the same earlier time, the general hospital was a place to go when all hope for life ceased to exist. It was a depressing situation when one "had to go to the hospital."

Today these conditions have changed or are changing. Postgraduate medical and dental education—and particularly, in the case of the latter, pre-professional and professional education — have produced great numbers of well-trained specialists who have been distributed to the smaller cities and who now give these centers the same broad coverages of medical and dental fields as the larger cities have.

The Hill-Burton Act which both the medical and dental professions supported heavily, has provided facilities that a few years ago were only a dream. There are approximately 7,000 hospitals in the United States; dentists are on the staff of about 2,200 of them — thereby assuring the public that all of their health problems can be met adequately. Incidentally, one of our great problems is the fact that the hospitals which receive Hill-Burton funds and other hospitals must be enlarged due to increased hospitalization coverage and the fact that patients no longer fear to go to hospitals.

While medicine and dentistry have made great strides and advancement during the past few years, both in preventive and corrective procedures, one of the most dramatic dental advancements is that of fluoridation of community water supplies. There are now 1,426 communities, both large and small, with over thirty million people that have fluoridated communal water supplies. The American Dental Association, the American Medical Association, the Arkansas State Dental Association, the Arkansas State Medical Society, the American Association for the Advancement of Science, and in fact all major health organizations including the World Health Organization has endorsed this procedure. This is just another illustration of the health professions joining together for the benefit of the public. I

should particularly like to compliment Dr. Ben Saltzman for his outstanding aid in matters relating to water fluoridation and rural health conferences.

On a local level, the Arkansas Medical Society and the Arkansas State Dental Association have cooperated closely in legislative efforts. The State Dental Association supported fully the Arkansas Medical Society's efforts to obtain the Health Center in Little Rock, and while we had some well-meaning people that attempted to establish a dental school within this state, the Arkansas State Dental Association opposes the establishment of a dental school in Arkansas because we cannot supply the finances, the teaching personnel, the student personnel, nor the patient personnel that would be required to maintain a class A dental school. We also well recognize that if we attempted to secure a dental school, that with the financial problems involved, it would jeopardize the Medical School of Arkansas and its rating.

Incidentally, I am sure you will be pleased to note that we have over 100 Arkansas students in dental school today, and that every applicant that has the necessary qualifications can get into dental school. I am sure you will be interested to note that over one-half of our students entering dental school today have completed four years of college training before entering dental school.

From our 46 dental schools, we graduate 3,100 dentist per year. Approximately 900 die; approximately 1,000 retire; this gives a net gain of about 1,200 each year. The cost of schooling is approximately \$2,500 annually, with dentistry being the most expensive of all professions. In addition to pre-dental and dental education, it requires an average of \$7,000 to equip a modern dental office.

In dentistry as in medicine, one of our great problems is over specialization, and being a specialist myself, I feel that I can make this statement. One of the most descriptive quotes that I have read concerning this was made by Martin Fisher, and it is as follows: "The specialist is too commonly hypertrophied in one direction, and atrophied in all the rest." While we need specialists, the backbone of the medical and dental professions are the general

practitioners, and those of us in specialties should never forget this.

As I have stated before, both fields have excellent opportunities to assist the public in regards to health, and it is our moral obligation to continue the educational programs, even though we all realize that it is a discouraging procedure at times. How much better it would be if we could educate the public to have a physical examination, both medically and dentally, at least once annually. We all know that people will have their automobiles, their floor furnaces, their refrigerators, and all other mechanical gadgets checked quite often, but that intangible thing called "health" can wait.

The dentist has an excellent opportunity — not to advise that tonsils be removed, but when necessary, to advise that the patient see his family physician for his opinion in the matter. The dentist is the first, many times, to see mouth cancer, allergies, mumps, and many other manifestations of disease, and it is his obligation to urge that the patient contact his family physician immediately.

The physician, too, has a wonderful opportunity to assist the dental profession in pointing out to the people the necessity of having routine check-ups so that if the dentist finds infected teeth or mal-positioned teeth, or contributing causes towards systemic disorders, that adequate care may be taken towards the dental correction of predisposing causes of systemic diseases.

Thank goodness, most of the physicians today have learned that all arthritis isn't caused from teeth. Actually, less than one per cent of arthritic conditions arises from dental disorders, and yet many physicians, and some dentists, I am sorry to say, have advocated the wholesale extraction of perfectly good teeth in order to correct arthritic conditions. Only when radiographic evidence supports this supposition, should teeth be extracted in an effort to relieve this or any other systemic disorders.

Too often do some physicians and some dentists minimize the care of deciduous teeth, whereas it is actually more important for a child to have good deciduous teeth than it is for the adult to have good

permanent teeth. The child grows and develops more in the first 12 years when he has these deciduous teeth than at any other time and decayed, broken-down deciduous teeth make excellent hiding places for bacteria of all categories, because the warm, moist condition of the oral cavity are most conducive to their growth and increased virulence.

Both physicians and dentists are becoming more conscious of diet and its relationship to the individual than ever before. More medical and dental research projects are being carried on today for the benefit of the public than ever before. Even with more and better trained personnel and facilities, medicine and dentistry will always be busy professions. Over 4,000,000 babies are born each year, and even though various diseases have been conquered, others spring up to take their places. In dentistry, even though we have fluoridation and other preventive and corrective procedures, we will still have busy practices.

EXPLANATION

Please listen to this, and notice the "ifs": *If* all of the 97,500 dentists in the United States were to work 24 hours a day, and *if* all of the people of the United States were to have all of the dental services done that should be done, it would require 400 years to catch up with just what needs to be done today.

Obviously, all people do not avail themselves of preventive medical and dental care, but it is our moral responsibility to keep up an active educational program.

Did you know that? — the average age of a dentist is 48? The national ratio of dentists is 1 per 1667. The average net income (before taxes) is \$12,500. Forty-three per cent of gross income of dentists is expenses. Forty-seven thousand people are out of work daily on account of dental disease. Women patients outnumber men 160 to 100. Dentists live to an average age of 67.5 or 2.8 years longer than that of the general public. Circulatory diseases account for 55 per cent of dentists' deaths, and neoplasms, 16 per cent. The accidental death rate for dentists is one-half that of the general public. I regret that time does not permit the quotation of the results of many other surveys.

In closing, I suppose everyone has a particular poem or a bit of prose or a quotation that he particularly likes. In my own particular case, I like this short quotation which is entitled, "My Creed." To me, it typifies the individual physician and dentist.

MY CREED

"I do not choose to be a common man. It is my right to be uncommon — if I can. I seek opportunity — not security. I do not wish to be a kept citizen, humbled and dulled by having the state look after me. I want to take the calculated risk; to

dream and to build, to fail and to succeed. I refuse to barter incentive for a dole. I prefer the challenges of life to the guaranteed existence; the thrill of fulfillment to the stale calm of utopia.

"I will not trade freedom for beneficence nor my dignity for a handout. I will never cower before any master nor bend to any threat. It is my heritage to stand erect, proud and unafraid; to think and act for myself, enjoy the benefit of my creations and to face the world boldly and say, this I have done,

"All this is what it means to be an American."



Plastic Surgery

JAMES G. STUCKEY, M.D.
LITTLE ROCK, ARKANSAS

Dr. A. J. Barsky has recently performed plastic surgery on 25 patients injured in the Hiroshima atomic bomb blast. All the patients were 1 mile from the epicenter and their injuries were due to heat and flying debris, not radiation. The patients developed keloids, a tendency in the Japanese, due to infection, slow healing, etc. The defects were repaired by the use of abdominal flaps for face and neck scars. It was difficult to find areas of good skin because of previous surgery. Dr. Barsky states that there is no set-up anywhere to treat the mass casualties of an atomic bomb blast.

Most of the patients near enough to the epicenter of an atomic bomb air blast to be affected by radiation would also be near enough to the blast effect that it alone would be fatal. However, there are several cases where decontamination teams that have gone into the area of blast have picked up "hot" debris and received severe radia-

tion burns to the hands. These burns resemble third degree thermal burns and are treated much the same way, by debridement and skin grafting.

Dr. J. B. Brown believes that electrical burns are best handled by debridement followed by immediate repair. Soft tissue repair is done most simply with a free graft, but a local or immediate direct short broad pedical or distant flap may be needed because of the necessity of subsequent bone or tendon grafting.

Dr. P. W. Greeley has pointed out that hematomas or serum accumulation frequently prevents the take of a skin graft. You can evacuate these up to 72 hours after surgery and the graft will live. A delay in grafting of 24 to 48 hours of doubtful surgical wounds will result in a higher percentage of take.

Dr. R. C. Ye has found there is a relationship between the Ph of the granulation tissue and the "take" of the skin graft.

The Ph was determined by the use of test paper and it was found that dirty wounds with a Ph of 6.8 were very difficult to graft whereas clean wounds with a Ph of 7.4 would take 95 to 100 per cent of the grafts.

Dr. C. Neumann has developed a technique for the expansion of a skin area by the progressive distention of a subcutaneous balloon. He used the method in securing skin for the reconstruction of an ear. He got the idea from African natives who wear huge lip rings.

Dr. J. J. Longacre has developed a technique to replace skull defects by the rotation of local flaps for soft tissue covering, then removal of the patient's own alternate ribs, splitting them and using these for bone replacement of the cranium.

Dr. O. H. Stutville has used the patient's 2nd metatarsal head and the 5th rib to replace the condyle of the mandible lost due to infection trauma or surgery. He found

that growth of the mandible in a child would continue at its normal rate.

Dr. T. deCholnoky has developed a technique for the restoration of near normal breast contour following a complete subcutaneous mastectomy. The nipple is preserved, and a local dermal fat pad is used to give the breast its new shape. This operation is applicable to cases where the breast tissue alone should be removed as in painful cystic mastitis.

The use of plastic sponges to fill out small breasts has proven unsatisfactory. The sponges are infiltrated by fibrous tissue and become very hard and they are sometimes not tolerated by the patient and have to be removed. The question of their carcinogenic potential has not been answered. Dermal fat pads have been used successfully for this procedure.

NOTE: The material for this review was obtained from yet unpublished papers presented at the American Society of Plastic and Reconstructive Surgery meeting in October of 1956.



A TEACHING SEMINAR FROM THE UNIVERSITY OF ARKANSAS SCHOOL OF MEDICINE

The Use Of "Corticoids" As An Adjunct In The Therapy Of Severe Infectious Diseases*

EUGENE J. TOWBIN, M.D., PH.D.

The dangers of cortisone therapy, though well known, bear re-emphasis at the very beginning of our discussion of "corticoid" therapy of fulminant infections. Sodium retention, potassium depletion, osteoporosis and other manifestations of negative nitrogen balance, emotional derangements which may be as severe as a full-blown psychosis, gastro-intestinal ulceration which may proceed to perforation and fi-

nally, masked infections such as peritonitis following gastro-intestinal perforation, break-down and dissemination of tuberculosis and metastatic staphylococcal abscesses are always in mind as potential complications of cortisone therapy. Such possibilities strongly mitigate against the indiscriminate use of these hormones. We do know that these steroids have an important role in the bodily adjustments to many types of stress, witness the vulnerability of the patient with adreno-cortical insufficiency, and we need to investigate the manner in which "Corticoids" affect

*From the Department of Medicine, University of Arkansas Medical Center and the Veterans Administration Hospital, Little Rock, Arkansas.

Presented before the Oklahoma-Arkansas Regional meeting of The American College of Physicians, Tulsa, Oklahoma, October 20, 1956.

the host's response to infection before we can begin an evaluation of their clinical usefulness.

ALTERATIONS IN GENERAL HOST RESPONSES

Very shortly after the dramatic demonstration of the effect of cortisone on rheumatoid arthritis Kass, Ingbar & Finland (8) reported that ACTH caused prompt defervescence and disappearance of all toxic symptoms in a man who had lobar pneumonia even though pneumococci could still be cultured from the blood and sputum.

This was the first demonstration of the so-called "masking" of the symptoms of infection. This effect is, in general, proportional to the dose of the steroid and severe infections may produce symptoms on low doses. If we turn to the experimental literature we find reports too numerous to list here, which indicate that cortisone or ACTH treatment made animals more vulnerable to a wide variety of experimental infections. In many instances mortality was high with an infection which was fairly well tolerated in the control animals.

IMMUNOLOGIC ALTERATIONS

One cannot explain the observations noted above by postulating changes in immune mechanisms. It has been demonstrated in man that cortisone does not interfere with the union of antigen and antibody. The rate of decline of antibody already formed is too slow to account for the rapid clinical response to cortisone administration. Hahn, et al., (5) demonstrated that cortisone did not inhibit the rise in serum anti-streptococcal (ASO) titre; nor did it effect the production of antipneumococcal antibody or the appearance of cold agglutinins following primary atypical pneumonia (8). Such observations support the view that, in general, the doses of cortisone used in clinical application do not suppress antibody formation. Regarding skin reactivity, it may be said that the prompt histamine mediated reaction is little altered whereas the more slowly developing, tuberculin type, reaction characterized by much cellular infiltrate is greatly inhibited by cortisone.

ALTERATIONS OF LEUKOCYTES AND PHAGOCYTOSIS

The white cell is in the first line of bodily defense against bacterial infection. How is it affected by cortisone? It has been shown that leukocytes injured mechanically or by various bacterial endotoxins release the enzyme lysozyme, decrease oxygen utilization, increase aerobic glycolysis and become more sensitive to poisoning by malonate. In all these respects cortisone increases the leukocyte resistance to injury. It does not matter whether the cortisone is given to the donor animal before blood sample is secured or if the cortisone is added to the white cells in vitro.

This cortisone induced resistance to injury might seem to make the leukocyte less responsive to infection for it is generally agreed that phagocytosis is markedly depressed by cortisone. Such observations have been made with india ink particles and a great variety of bacteria, in vitro and in viro, in experimental animals and in man. Those bacteria that are engulfed by leukocytes often retain their straining properties, indicating viability, and have actually been observed to propagate within the cortisone treated white cell. Even if the white cell may not be on the job, it is interesting to note that culture of hepatic vein blood from cortisone or ACTH treated rabbits revealed that mechanisms still existed for adequate removal of infused staphylococcal organisms (11).

ALTERATION IN INFLAMMATORY RESPONSE

The dramatic decreases in hyperemia, cellular exudate and edema fluid produced by cortisone and the inhibition of fibroblastic activity are well recognized properties of these steroids and need little elaboration here. These "inflammatory" processes are important to the body in the localization or "walling off" of infectious agents and, as illustrated in greater detail in our discussion of tuberculosis below, their inhibition by cortisone tends toward wide dissemination of infection.

THE ROLE OF ANTIBIOTICS

The reader will note that our discussion so far has not considered antibiotic or chemotherapeutic agents but has been limited to situations, experimental and clinical.

cal, where only "corticoid" therapy was initiated. Does the addition of a potent antibacterial drug change the picture which up to now is quite dismal? Because one can control more factors in the laboratory than at the bedside, animal experiments often can answer our questions more rapidly than can clinical observation. Glaser (4), in a series of beautifully designed experiments, produced streptococcal pneumonia in rats by intrabronchial spray of bacterial cultures. Animals which were treated with cortisone developed a more fulminant disease than did the control animals, this in keeping with other observations noted above. However, if after the infection was started in normal rats one compared therapy with penicillin alone vs. penicillin plus cortisone, it was noted that the animals on combined antibiotic and steroid treatment developed much less intense pulmonary lesions and recovered more promptly. In this experiment we see quite clearly the difference between the patient on chronic steroid therapy who is made more susceptible to infection and the patient who is overwhelmed by an infection and may be aided by combined antibiotic and steroid treatment. We can now examine some specific diseases and the basis for the use of steroids in their treatment.

TRICHINOSIS

In human infections with *Trichinella* we are not concerned with multiplication of the invading organism for all encysted organisms die in the human host. Apparently, the diseased state is due to the intense inflammatory reaction elicited by the cysts so widely spread through muscle and vital organs. It will be no surprise to learn that cortisone or ACTH produce prompt and dramatic improvement in cases of trichinosis showing such serious manifestations of parasitism as myocarditis and encephalitis (12). Such therapy can bring help to the patient whose symptoms are severe enough to warrant the risks of cortisone therapy. Usually a 4 to 5 day course of steroid is adequate.

In this instance we are depending solely upon the anti-inflammatory action of the hormones for the beneficial effect and we needn't be concerned with antibiotics, for the parasite causing the trouble is already dead.

MENINGOCOCCEMIA

This is a treacherous infection and must always be considered a medical emergency. In animals the mortality from experimental meningococcal infections is not changed by cortisone but the cortisone treated animals do not have hemorrhagic adrenal glands when they are autopsied. All too often the clinical course and pathologic findings in human meningococcal meningitis suggest that death was due to adrenal destruction. Since such damage can occur swiftly and insidiously and since it can be prevented by large doses of cortisone and intravenous hydrocortisone (6), the author is of the opinion that steroid therapy should be second only to prompt and massive antibiotic and chemotherapy in the treatment of meningococcemia.

TUBERCULOSIS

Direct microscopic observation of a culture of tubercle bacilli injected into an animal's cornea reveals that a great migration of cellular elements tends to surround and localize the bacterial culture. If the animal is treated with cortisone such cellular infiltration does not occur and the infection spreads rapidly. Ebert (3) observed that in experimental tuberculosis there was loss of tone in tiny blood vessels, damage to the endothelium of arteriols and venules, considerable diapedesis of leukocytes and much exudate formation. Each of these manifestations of the infection was greatly reduced when the animals were placed on cortisone.

The treatment of tuberculous meningitis is difficult for even when the patient survives long enough for chemotherapy to have effect the development of hydrocephalus following cerebrospinal block and central nervous system damage secondary to arteritis may kill or severely damage the patient.

It is suggested that steroid therapy be added to the usual chemotherapy in those cases of tuberculous meningitis where the initial condition is not good or where there has not been prompt response to conventional therapy (7). With cortisone inhibition of inflammatory and fibroblastic processes there is much less tendency for the formation of lesions which block the drainage of cerebrospinal fluid and, in fact, a block may resolve, the cellular and protein

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contents of the spinal fluid fall toward normal, there is suppression of the tuberculous arteritis and finally, the general detoxifying effect of the steroids help a critically ill patient survive the first few weeks thereby allowing time for the chemotherapy to act. Caritation of pulmonary lesions and development of miliary tuberculosis are ever present dangers and only careful clinical evaluation can determine whether it is worth taking the risks of adding cortisone to the usual therapy of tuberculous meningitis.

BRUCELLOSIS

The pathogenesis of brucellosis has been studied very thoroughly. Injection of a dose of brucella endotoxin which produces 75 per cent mortality in control mice causes only 5 per cent mortality in mice treated with cortisone (15). In clinical usage results are somewhat less dramatic but definitely significant. When antibiotic therapy plus cortisone is compared with antibiotic therapy alone, cortisone may be said to produce a defervescence in one rather than five days, serum titre of agglutinins is little changed, skin sensitivity to brucella antigen is reduced and the relapse rate seems to be higher (16). It is felt that cortisone should be added only in the treatment of the acutely ill patient.

OTHER INFECTIONS

Enthusiastic reports on the use of cortisone in the treatment of a great variety of infections may be found. In many instances, however, the cases are not well documented and the clinical experiments are so poorly designed as to allow interpretations other than those chosen by the authors.

Among those infections in which "corticoids" have been shown, by careful study, to be of value in the treatment of severe cases we can list typhoid (17), scrub typhus (17), Rocky Mountain Spotted Fever (18) and severe bronchopneumonia in the aged and debilitated patient (1).

The use of cortisone in viral diseases does not rest on any firm experimental basis for in the laboratory we find that viral infections are usually made worse and new fulminant pathologic pictures may be evoked, e.g., the appearance of myocardial necrosis in Coxsackie virus infected mice

(9). There is at least one viral disease in which cortisone produces dramatic benefit and that is severe mumps orchitis (14). The usefulness of steroid therapy in severe infectious hepatitis is not definitely established even though there are some reports of good results especially in cases with hepatic coma (2) and those with "cholangiolitic hepatitis" (13). Such effects may be largely mediated by improving appetite, etc., but even if this were so it would not reduce the value of such therapy.

DOSE SCHEDULE

The aim of "corticoid" therapy in severe infection is to produce a high steroid blood level promptly, reduce the dose as quickly as the clinical situation will allow, end with a moderate dose of long acting ACTH to minimize the possibility of adrenal cortical suppression and lastly to continue intensive antibiotic therapy for at least four days after the last dose of ACTH. Kinsell (10), John (6) and their coworkers suggest a four day schedule which is adequate in some 80 per cent of the cases needing such supportive therapy.

Immediately after determining the infectious agent and starting appropriate intensive antibiotic therapy a slow intravenous drip of 40 units of ACTH and 100 mgm. of hydrocortisone is started and 300 mgm. of cortisone is given intramuscularly. On the second day the intravenous drip contains only 10 units of ACTH, i.m. cortisone is reduced to 100 mgm. and 40 units of a long acting ACTH preparation are injected into the muscle. Day three sees the use of 50 mgm. of cortisone, i.m. and 20 units of ACTH gel i.m. On the fourth day therapy is completed with 10 units of i.m. ACTH gel. Some 10 per cent of the 300 cases seen by Kinsell (10) required therapy for 7 days while another 10 per cent needed even longer "corticoid" therapy.

SUMMARY

In summarizing we would do well to paraphrase those clinicians with the widest experience. Kinsell (6,10) states that when, as a result of late diagnosis, poor resistance of the host or unusually virulent infection the patient does not seem likely to live long enough to obtain benefit from antibiotic therapy the use of "corticoids" enables one to "buy time" until the indi-

cated antibiotic takes effect and/or the clinical status is improved so as to permit early definitive surgery. Adequate doses of ACTH and cortisone can suppress toxic symptoms in infections of varied etiology. Despite apparent striking clinical improvement, the organism causing the disease continues to flourish and unless eliminated by antibiotics and/or specific immune substances they will result in the death of the patient.

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Editorial

The American Bar Association Backs Legislation For Retirement Security

ALFRED KAHN, JR., M.D.

The American Bar Association has the same general interests in retirement income and taxation as the American Medical Association. Both acknowledge that the increasing number of older folks and the economic changes in the past century pose special problems to the self-employed person's ability to provide for his economic needs at the age of retirement.

In order to develop legislation to ease the financial burden of the retiring lawyer, the American Bar Association has sent out to its members a "briefing kit." This kit contains explanations of the measures they favor for retirement security; it even contains a small slip advising the American Bar Association that the various political candidates have been contacted and apprised of the merits of legislation setting up retirement security for the self-employed.

The Jenkins-Keogh Bill, which was introduced but not enacted in the last Congress, had provisions of great interest to the medical profession, and a similar bill will be introduced in the next Congress. The purpose of this proposed legislation is to equalize the self-employed man's opportunity to set aside tax free money during his peak earning years, and then tax this money later on when he uses it for retirement income. As is well known, corporation officers may set aside a certain part

of their income annually into an employees' trust. This officer pays no taxes on the money put into the trust, but is taxed on the rest of his income. After retirement, the trust pays out a set amount monthly or annually, and this is taxed at that time. This legislation thus permits deferment of taxation in order to set up a retirement security program. Inasmuch as income is lower in the retirement years, this money would presumably be taxed at a lower rate—lower income, lower income tax.

This kit from the American Bar Association contains some material which seems to be at variance with the stand of the American Medical Association. In one pamphlet Eugene J. Keogh endorses Social Security legislation. Keogh says that Social Security provided a bare subsistence level of income, and that his proposal is, so to speak, a "second layer" providing additional income. He stresses two favorable points in Social Security for lawyers, namely the survivors benefits and the ability to draw Social Security benefits after retirement age in any month in which he does not render substantial services in self-employment. Despite these provisions, the AMA does not favor Social Security for physicians for a number of other reasons.

Old age income is worthy of much thought by physicians. Favorable legislation should be strongly supported by organized medicine.



Editorially Speaking*

Did you ever wonder what happened to Mrs. Brown who came in for a couple of office calls and then cancelled her third appointment, paid her bill and was never heard from again? Or Mr. Jones who came into the reception room, sat around a while and then left, never to be heard from again?

Maybe the following reprinted in the Times (K. C.) which originally was published in the Minneapolis Star, may give a clue:

"A retail stores group has just completed a survey on loss of customers and the reasons are rather astonishing. One per cent die; 3 per cent move away; 4 per cent are classified as floater patrons; 5 per cent switch stores on the recommendations of friends; 9 per cent find they can buy cheaper at another store; 10 per cent are chronic beefers, but . . . get this . . . 68 per cent of lost customers blame it on the indifference of sales personnel."

"So what?" says the physician. "I don't run a store. I am a professional man." Wrong and right. Every professional man runs a "store" if the definition of such is "a place where something is purchased for cash or other credits." Every physician and every co-worker who works with the physician has something to sell.

Almost every office, no matter how small, has a receptionist. Sometimes that is the only co-worker. The prospective patient, the customer, always meets this "saleslady" first. Perhaps the first contact is over the phone, perhaps when the customer walks into the waiting room. She sells the general tone of the office, friendly or otherwise, efficient or otherwise, courteous or otherwise. And if she is a super

salesman, she can hold Mr. Jones until the doctor, who has fallen so far behind in his appointments, gets to the gentleman.

In a larger office there is another co-worker who "sells" the needle for taking blood specimens and for giving health restoring injections. This must be sold with the minimum of pain and the maximum of really true sympathy, not feigned small gushings.

Then there is the ultimate product, the knowledge and ability of the physician. Everything has led to this. This is what folks came to buy in this "store." And all is futility if the physician's advice is not followed or if followed and much time is given, the bill goes unpaid.

There has been a lot written about public relations in recent years. Most corporations have a P.R. Council. Some have a vice-president in charge of P.R., but we small independent businessmen could not afford a P.R. vice-president per office; it would probably be unethical to have one even if we could afford it.

So we each have to be our own P.R. Counsel, our own V.P. in charge of P.R. Our major contact with the public is our contact with the public, the customers who wish to buy our knowledge and ability . . . our patients and their close relatives.

Not only does personal success and failure depend upon the tone of these contacts but the entire reactions of the public towards our profession. Here is where we develop good will for ourselves or others, or here is where ill will is manufactured that expresses itself in every reaction of the individual in the future and it is the individuals of this country acting in groups that will decide our future.

G. Wilse Robinson, Jr.

*Reprinted from the *Weekly Bulletin*, Jackson County Medical Society, Kansas City, Missouri, October 20, 1956.

Medicine in the News

Sharpe General Depot Selected as Site of Army Ionizing Radiation Center

Sharpe General Depot at Stockton, California has been chosen as the site for the U. S. Army Ionizing Radiation Center, Wilber M. Brucker, Secretary of the Army, and Lewis L. Strauss, Chairman of the Atomic Energy Commission, announced today. The experimental center will be built by the Army Corps of Engineers and will include a nuclear reactor which will be built by the AEC.

The center will investigate the use of ionizing radiation in the preservation of food and conduct other projects of interest to the Department of Defense. The Quartermaster Research and Development Command at Natick, Massachusetts, will direct the operations of the center.

World Medical Association Elects Officers

At its 10th General Assembly held in Havana, Cuba, October 9-15, 1956, The World Medical Association elected the following officers:

PRESIDENT—1956-1957

Dr. Jose A. Bustamante, Cuba

PRESIDENT-ELECT—1956-1957

Dr. Ahmet Rasim Onat, Turkey

TREASURER—1956-1959

Dr. Ernst Fromm, Germany

MEMBERS OF COUNCIL—1956-1959

Dr. Gunnar Gundersen, U. S. A.

Dr. Marcel Poumailloux, France

Dr. S. C. Sen, India

Dr. Lorenzo Garcia-Tornel, Spain

International College of Surgeons Aid Hungarians

Chicago.—A \$1,000 contribution to aid Hungarian refugees in Austria was cabled November 18 by the International College of Surgeons following the receipt of an appealing letter from its Austrian Chapter, with offices in Vienna.

From the American Medical Association
Washington Office, November 8, 1956

Federal Medical-Health Spending for Fiscal Year 1957 (July 1, 1956, to June 30, 1957)

This is our fourth annual report on the Federal medical budget. To the extent we can make it so, it is a factual, objective study of how much the U. S. Government is spending this fiscal year in all health and medical fields. We are dealing with money that has been appropriated and currently is available to be spent. This **Special Report** is based on the actual appropriations, and on information obtained directly from Federal agencies and departments.

When talking in billions of dollars, it is often difficult to make the totals meaningful. However, here are some conclusions:

1. What the U. S. is spending in health fields alone represents an average cost of \$15.17 per man, woman and child. . . . Incidentally, it is costing each of them \$1.78 more this year than last.
2. If only wage-earners are considered, . . . they will be paying on the average \$38.72 each to finance the Federal government's health-medical operations. That is \$4.40 more than they paid last year.
3. The average family . . . will be paying \$54.61 this year for the U. S. government's health-medical activities.
4. Even in an overall Federal budget of \$61.2 billion, the total health cost is not insignificant. It is a billion dollars more than the cost of running the Commerce Department, half a billion more than all Agriculture Department expenses and six times Interior Department's budget.
5. Mostly because of spectacular increases for research, health programs of the Department of Health, Education, and Welfare this year will cost half again as much as they did last year.
6. For the first time since World War II, medical costs of Veterans Administration top the list, passing the

Defense Department. A close third is the Department of Health, Education, and Welfare.

This **Special Report** is based on spending alone. We do not undertake to evaluate the many individual programs. Obviously many of them are necessary just to maintain this country's unsurpassed public health standards. Others undoubtedly will pay rich dividends in procedural and scientific discoveries. Some probably could be questioned. But the only purpose of this study is to show exactly what they cost.

A.M.A. Jointly Sponsors Nutrition Meeting

"Fats in human nutrition" with special emphasis on cholesterol and atherosclerosis will be discussed at an American Medical Association symposium to be held March 15, 1957, in New Orleans. The one-day meeting is sponsored by the A.M.A.'s Council on Foods and Nutrition with the cooperation of the Orleans Parish Medical Society, the New Orleans Graduate Medical Assembly, the School of Medicine of Louisiana State University and Tulane University School of Medicine.

Extension of Salk Vaccine Grants Urged by Health Officers

State and territorial health officers have recommended continuation for another year of the Salk polio vaccine grants program now scheduled to expire next June 30. This is the program under which the government gives the states money to aid in setting up inoculation programs. The first year \$30 million was made available, and this year the total is \$23.6 million.

State Health Officers Urged to Step Up Polio Vaccinations

State and territorial health officers holding their 55th annual conference with Public Health Service and HEW officials received from Surgeon General Burney new reports on the Salk vaccine. He estimated that by the end of this year about 16,000 cases of poliomyelitis will have been reported, the lowest since 1947. With manufacturers having some 17 million cc's

of the vaccine on hand the federal assistance program ending next June 30, Dr. Burney said now was the time to step up inoculations. Suggested areas of action: (1) completion of the three-injection schedule, (2) extension to young adults, especially parents of young children, and (3) reaching the teenage groups.

"The Medical Witness" Subject of First Film in New A.M.A. Series on Doctor-Lawyer Relations

Chicago, Ill., Nov. 19.—The American doctor, increasingly on call as a courtroom witness, is about to receive expert help in presenting his testimony.

The American Medical Association and the American Bar Association have joined forces for the first time to present a series of educational films dealing with the professional relationships of doctors and lawyers, it was announced today by Dr. George F. Lull, secretary and general manager of the A.M.A.

The first film in the series "The Medical Witness," will have its premiere showing at the A.M.A.'s clinical meeting in Seattle, Wash., Nov. 27, after which it will be made available for showings before medical societies, bar associations, and other professional groups throughout the country.—A.B.A.

The Month in Washington

Washington, D. C.—Federal health and medical spending for all agencies of government this fiscal year is expected to reach a new high peak. The total is placed at \$2,558,719,168, an increase of nearly 13% over the last fiscal year, which itself set a new record.

Open House at Houston-Crow Clinic

The new Houston-Crow Clinic in Magnolia held open house Sunday, November 4th, for the public of Magnolia and surrounding area to visit the new and modern building. Evan G. Houston, M.D., graduated from the University of Arkansas School of Medicine. After completing three years of post graduate training at the St. Anthony Hospital of Oklahoma City, Okla., and the University of Oklahoma, Dr. Houston

moved to Magnolia in the latter part of 1949. H. Blake Crow, M.D., also graduated from the University of Arkansas School of Medicine. He moved to Magnolia in 1954 after completing post graduate training at the Arkansas Baptist Hospital in Little Rock.

Medical Advisory Committee Meets at Health Clinic

Members of the Medical Advisory Committee of the Community Health Clinic attended an all-day meeting at the Clinic in Perryville Sunday, Nov. 4th.

Dr. Louis K. Hundley of Pine Bluff is chairman with Dr. William Brooksher of Ft. Smith, Dr. James T. Kolb of Clarks-ville, Dr. Fount Richardson of Fayetteville, Dr. Ben Saltzman of Mountain Home and Dr. H. W. Thomas of Dermott as members. The morning session was devoted to discussion of medical problems with Dr. Nils Pehrson and to plan with him the continuing medical practice.

The afternoon session was attended by Mr. Winthrop Rockefeller, chairman of the Rockwin Fund; the Medical Advisory Committee, members of the local board and members of the Health Education Advisory Committee. Mr. Rockefeller presided. Work at the clinic to date was discussed and plans were made for the coming years.

House Hearings on Medical Education Dropped for This Year

Because of changes in the make-up of the House Interstate and Foreign Commerce Committee, plans for holding panel-type hearings on medical education next month have been dropped. A major reason for the decision was the death of Rep. Percy Priest who headed both the full committee and the health subcommittee, which expected to conduct the hearings. Decision to set aside the hearings at least for this year in no way affects the work of the staff which continues to gather a mass of data bearing on financial needs of schools, and the supply and demand of medical school applicants.

Institute Makes First Awards in Cerebral Palsy Study.

First awards have been made in the Public Health Service's research program

in cerebral palsy and mental retardation. Yale University School of Medicine has received \$107,799, and Brown University was granted \$97,633.

Dr. John Cronin Promoted

The first major personnel shift since Dr. Burney took over as Surgeon General of Public Health Service elevates Dr. John Cronin, who has directed the Hill-Burton hospital construction program for the last seven years. He becomes chief of the bureau of medical services, which carries the rank of major general.

VD Control Unit Moving to Disease Center at Atlanta

The Public Health Service's venereal disease unit is being shifted from Washington to the Communicable Disease Center at Atlanta, Ga. The shift will be made next February and will involve about 50 employees.

Army-Air Force Intern Program

Army's Medical Intern Program is described in a new brochure for young graduate doctors. . . . Air Force has 180 physicians in residency and 155 in internships, two-thirds of the latter group in civilian hospitals.

Contracts Ready With 17 States For Medicare Program

After less than two weeks of negotiations, contracts have been signed or are about to be signed covering medical care in 17 states under the dependent medical care act, which will go into effect on December 7.

5,000 Family Physicians to Attend March 25-28 Meeting in St. Louis

Kansas City, Mo.—More than 5,000 of the nation's family physicians will attend the Ninth Annual American Academy of General Practice Scientific Assembly, March 25-28, 1957, in Kiel Auditorium, St. Louis, Mo.

The record-shattering attendance was today predicted by Mac F. Cahal, the Academy's executive secretary and general counsel. Each of the past four meetings

has successively established a new attendance record.

During the four-day scientific meeting, the doctors will hear outstanding speakers discuss important subjects including infertility, polio vaccination, and the "neglected" pediatric areas, the eyes, ears, and feet. They will visit 60 scientific and 260 technical exhibits.

Keogh Urges Colleagues to Back Pension Plan for Self-Employed

Optimistic over prospects of Jenkins-Keogh legislation in the next Congress, Rep. Eugene Keogh (D., N. Y.) is urging fellow members of the House to make known their support of the idea during their campaigning. He expressed it this way: "We think that if you make known to those professional, agricultural and business groups in your district your support of the bill, it will not only be of considerable assistance in your re-election but will assure its passage next year."

He forecast a new amendment to the bill that was considered in the 84th Congress (H. R. 10). It would permit a person to withdraw funds from a pension fund prior to age 65, subject to a penalty equal to the taxes previously deferred on money so withdrawn. The original proposal allows a certain amount of money to be set aside in an annuity fund each year with a provision for deferring the taxes on that amount until it is returned in retirement payments.

U. S. Checking Administrative Cost of Employee Health Insurance

As another step in the gathering of data on federal workers health insurance, the General Accounting Office on October 24 asked all U. S. department heads to estimate what it would cost to administer a payroll deduction program for basic insurance. The agencies were sent tentative criteria drawn up by GAO of what commercial and non-profit plans feel would be required of agencies in order to administer a payroll program. The criteria, in turn, were the product of a questionnaire sent 11 prospective insurers early in September.

PHS Center to Promote Research in Problems of Aging

Promotion of research in the problems of the aging population is the objective of a new Center established by Public Health Service. To be known as the Center for Research on Aging, the new unit will be under direction of the National Institutes of Health at Bethesda and will be headed by Dr. G. Halsey Hunt, presently associate chief of the PHS Bureau of Medical Services. He will take the post November 19.

Doctors Asked to Lead in Highway Safety

Chicago.—Two American Medical Association publications today challenged physicians to be more than just doctors to injured motorists—to become leaders in the whole field of road safety.

An editorial and article in the current (Oct. 27) A.M.A. Journal and a guest editorial in the October A.M.A. Archives of Internal Medicine outlined the role of physicians in the fight against a "disease" that is killing persons at the rate of one every 14 minutes and injuring someone every 25 seconds in the U. S.

Success in meeting the problem of ever-increasing injury and death on the highways will require the cooperation of "the best minds in medicine, highway engineering, and car design," the Journal editorial said.

Physicians may be the logical leaders in a co-ordinated movement because of their biological science background and their intimate knowledge of crash effects and problems of human behavior that might figure in smashups, the Journal article quoted Dr. Fletcher D. Woodward, Charlottesville, Va., as saying. He is chairman of the A.M.A.'s new committee on medical aspects of automobile injuries and deaths.

A.M.A. Jointly Sponsors Nutrition Meeting

"Fats in human nutrition" with special emphasis on fats, cholesterol and atherosclerosis will be discussed at an American Medical Association symposium to be held March 15, 1957, in New Orleans. The one-day meeting is sponsored by the A.M.A.'s Council on Foods and Nutrition with the

cooperation of the Orleans Parish Medical Society, the New Orleans Graduate Medical Assembly, the School of Medicine of Louisiana State University and Tulane University School of Medicine.

Medical Education Meeting Set for February 10-12

Graduate medical education for general practice will be the topic of discussion at the opening session of the 53rd annual Congress on Medical Education and Licensure to be held February 10-12, 1957, at the Palmer House, Chicago. The three-day meeting will be sponsored by the A.M.A.'s Council on Medical Education and Hospitals, the Federation of State Medical Boards of the United States and the Advisory Board for Medical Specialties.

A.M.A. to Honor Young Scientists

The two high school students winning top A.M.A. awards at the National Science Fair next spring will be invited to be guest exhibitors at the A.M.A.'s Annual Meeting June 3-7 in New York City. Dr. Alphonse McMahon, chairman of the Council on Scientific Assembly, will serve as chairman of the A.M.A. judging committee at the Fair in Los Angeles May 9-11.

Fat Upper Arms Confuse Blood Pressure Meter

Chicago.—A more accurate reading of blood pressure in obese persons can be obtained by measuring the pressure below the elbow rather than above, as is usually done, three New York physicians said today.

They said that falsely high blood pressure readings may be obtained in people with large flabby upper arms. The reason for this is not entirely clear, but it may be due to the larger circumference and the compression of flabby tissue in the upper arms, they said in the current (Nov. 3) Journal of the American Medical Association.

NIH to Translate Russian Medical Research Reports

American scientists will now be kept up-to-date on Russian medical research findings. The National Institutes of Health, using \$250,000 appropriated by the last

Congress, has initiated a program of translating Soviet scientific information in the biological and medical sciences.

Announcements

PAN AMERICAN ASSOCIATION OF OPHTHALMOLOGY PLANS NEW YORK MEETING

Mayor Robert F. Wagner of the City of New York will extend a personal greeting to members of the Pan American Association of Ophthalmology when it meets in New York for its Fourth Interim Congress and the National Society for the Prevention of Blindness for its annual meeting, April 7-10, 1957. The two organizations will meet jointly, with headquarters at the Hotel Statler.

CONGRESS ON MEDICAL EDUCATION FEBRUARY 10-12

The 53rd Annual Congress on Medical Education and Licensure will be held in Chicago's Palmer House, February 10-12.

As in other years, the February program will center around an important current problem: graduate medical education for general practice.

SCIENCE FAIRS, 1957

The A.M.A. will again award citations to top scientific youth at the 1957 National Science Fair in Los Angeles, May 9-11. In addition, the two "first place" winners will be invited to exhibit their projects at our 106th Annual Meeting in New York City, June 3-7.

AMERICAN BOARD OF OBSTETRICS AND GYNECOLOGY

The office of the Secretary, Robert L. Faulkner, M.D., 2105 Adelbert Road, Cleveland 6, Ohio, announces the next scheduled examinations (Part I), written, for all candidates will be held in various cities of the United States, Canada, and military centers outside the Continental United States, on Friday, February 1, 1957, at 2:00 p.m.

AMERICAN COLLEGE OF SURGEONS REGIONAL MEETING

The American College of Surgeons will have a regional meeting in New Orleans on February the 4th to the 7th inclusive, 1957. All surgeons are welcome to attend. Non-fellows are charged a \$5.00 registration fee. The meeting will be held at the Hotels Jung and Roosevelt.

FELLOWSHIP IN INDUSTRIAL MEDICINE

The University of Cincinnati's Institute of Industrial Health is offering graduate fellowships in Industrial Medicine. The Institute, which is in the College of Medicine, provides professional training for graduates of approved medical schools who have completed at least one year of internship.

NORTH LITTLE ROCK MEETING ON NEURO-PSYCHIATRY

The Ninth Annual Institute in Psychiatry and Neurology will be held at the Veterans Administration Hospital, North Little Rock, Arkansas, on February 28 and March 1, 1957. Participants will include Dr. Francis J. Braceland, Institute of Living, Hartford, Connecticut, President, American Psychiatric Association; Dr. Esther Lucile Brown, Director of University and Community Relationships, Boston University School of Nursing, Boston, Massachusetts; Dr. Donald A. Covalt, New York; University Bellevue Medical Center, New York, New York; Dr. Iago Galdson, New York Academy of Medicine, New York, New York; Dr. William E. Gordon, Professor of Research, George Warren Brown School of Social Work, Washington University, St. Louis, Missouri; Dr. E. Lowell Kelly, Professor of Psychology, University of Michigan, Ann Arbor, Michigan; Dr. Louis A. Krause, University of Maryland, School of Medicine, Baltimore, Maryland; Dr. L. H. McDaniel, Tyronza, Arkansas; Dr. William S. Middleton, Chief Medical Director, Department of Medicine and Surgery, Veterans Administration, Washington, D. C.; Dr. Earl G. Planty, Professor of Management, University of Illinois, Urbana, Illinois; Mr. Winthrop Rockefeller, Little Rock, Arkansas; Dr. Lewis R. Wolberg, New York, New York; and Dr. Harold G. Wolff, The New York Hospital, New York, New York.

Obituary

Dr. Walter Jackson Hunt, 69, died Sunday, October 21, as he was driving back to Warren from his fishing camp on the Saline River. It was later established that he died of a heart attack. Dr. Hunt was born on July 27, 1887, in Johnson County. He was a 1911 graduate of the University of Arkansas Medical School. He served in World War I, and practiced medicine and surgery in Oklahoma and Arkansas before coming to Warren in 1935. There he established a hospital which operated until the completion of the Bradley County Memorial Hospital in 1951. He had served as chief of staff at the new hospital. He was a member of the Bradley County and Arkansas medical societies, and was also affiliated with the American Medical Association. He was a Legionnaire, and a member of the First Baptist Church. Dr. Hunt is survived by his wife, Mrs. Gay Nell Hunt; a daughter, Mrs. Leon Green; one brother and three sisters.

Dr. Jim Johnson, Sebastian county health officer, died Tuesday, November 13, in Fort Smith, at the age of 66. His death followed an extended illness. Mr. Johnson was born and reared in Greenwood, Ark., and attended schools there and in Barling. He graduated from the University of Arkansas Medical School in 1914. After graduation, the doctor entered private practice in Fort Smith and was appointed county health officer in 1922, holding that position at the time of his death. He was a member of the First Baptist Church, Belle Point Masonic Lodge, Amrita Grotto and Fort Smith Consistory. Survivors include one daughter, Mrs. Robert Ryland of El Dorado; three grandchildren and several nieces and nephews.

Dr. Shelley C. Grant died in his home Friday, November 16, at the age of 72. Dr. Grant retired four years ago. A former resident of Mulberry, Ark., Dr. Grant moved to Van Buren after his retirement. He practiced medicine in Mulberry for over 40 years. Survivors include one daughter, Mrs. Sue Burnett of Salem, Ore.; one brother, W. B. of Oklahoma City, Okla.; and one sister, Mrs. A. E. Barksdale of Jackson, Tenn.

TUBERCULOSIS ABSTRACTS

Issued by The National Tuberculosis Association
Sponsored by
The Arkansas Tuberculosis Association

Importance of Chest X-rays in Total Radiation Exposure

*A Statement by James E. Perkins, M.D., Managing
Director of National Tuberculosis Association.*

The report of a survey by six committees of the National Academy of Sciences on radiation is of particular concern to tuberculosis workers and physicians because of the emphasis which has been put upon the chest X-ray.

The survey was made primarily to evaluate the effect on the population of the testing of nuclear weapons and an estimate of future radiation likely to occur from the extension of peaceful uses of atomic energy. The use of radiation in medical practice inevitably came into the discussion. The point was made that all radiation is harmful from a genetic point of view, inevitably producing a number of injuries to the reproductive cells, which in turn results in certain mutations. The effect is cumulative and such injury may not show up for generations in the future. If such radiation is not controlled carefully, the inevitable effect, it is said, will be an increase in the death rate, a decrease in the birth rate, and ultimate eradication of the human species.

From a long-range genetic standpoint, a small exposure to radiation of the general population is just as bad as a high degree of radiation of a relatively small group of people. The important thing is the radiation of the reproductive organs (ordinarily referred to as the gonads). The local radiation of a part of the body, remote from the gonadal region, such as a dental X-ray, will result in a certain amount of radiation of the gonads themselves. The report states that the average dental X-ray results in a direct exposure of the face of about 5 r (r="roentgen," a unit of radiation) and of this exposure, .005 r reach the gonads.

There is some radiation that one can do nothing about; namely, the radiation from radio-active minerals and cosmic rays from outer space. With this so-called back-

ground radiation in mind, the scientists suggest that, in addition, man-made radiation of the general population should be kept below a total of 10 r's from conception to age 30, so far as radiation of the gonads is concerned. Those in occupations which necessitate greater exposure than this should keep such exposure below 50 r's during the first 30 years of life, and not to exceed another 50 r's between the ages 30 and 40. (Nine-tenths of children are born to parents under 40 years of age. Radiation of persons beyond the child-bearing age is obviously less serious.)

From the standpoint of mass use of chest X-rays for screening to detect the presence of active tuberculosis, the 10 r maximum limit obviously must be used, rather than the 50 r limit. The scientists point out that even a 10 r general exposure from man-made sources over the first 30 years of life will exert a certain toll in terms of hereditary defects, but apparently it is felt that this exposure will not be serious and is not unreasonable.

One can assume then that one has in the bank at conception 10 r's of X-rays or gamma rays. The object is to try to spend as little of these 10 r's as possible, doing so only when the benefits clearly outweigh the possible genetic injury which may result. This balancing of the assets and debits of a given X-ray exposure is an extremely difficult and rather nebulous thing, but it does make it clear that any X-ray program that yields no important practical results (such as using X-rays to check on the fitting of shoes) should be stopped.

To assist in the evaluation of a chest X-ray program, it is first necessary to know how much radiation of gonads results from a chest X-ray. It is evident that scientists do not feel that such exposure is entirely negligible.

A study at the Brookhaven National Laboratory shows the total dose received as a result of X-raying various anatomical structures under varying conditions. According to the Brookhaven figures the exposure incident to the conventional chest X-ray is 0.05 r. This is the *total* dosage received by the part being X-rayed. It is not the dosage received by the gonads through stray radiation and scattering inside the body. From the genetic point of view, the

important thing is not the total dosage but how much reaches the gonads.

Dr. W. Edward Chamberlain, Professor of Radiology, Temple University Medical School, Philadelphia, presented certain data at the last meeting of the Sub-committee on Tuberculosis of the National Research Council concerning the amount and seriousness of gonadal radiation resulting from various chest X-ray procedures. Dr. Chamberlain's calculations are as follows: *Approximate Radiation Received by the Gonads from a Single:*

1. Conventional chest film
(14"x17")0.00025 r
2. Regular photofluorograph 0.005 r
3. Photofluorograph using
the new mirror optic
system0.0015 r

On the basis of dosages given by the Brookhaven National Laboratory, the radiation reaching the gonads from a conventional chest X-ray or regular photofluorograph is apparently 1/200th of the total dosage received.

It is obvious from these figures that if the 10 r gonadal radiation were to be used up entirely by photofluorographs of the usual type, this would take some 2,000 such photofluorographic chest films during the first 30 years of life. Even if individuals followed the usual advice of an annual chest X-ray from the age of 15 onward, this would mean only 15 photofluorographs by age 30. Fifteen annual PF's would use up less than 1 per cent of 10 r's (actually .075 r) and would seem to make it clear that there is a large safety factor even in the use of the regular photofluorographs.

According to our data, the highest exposure chest X-ray gives no more gonadal radiation than the dental X-ray exposure. Fluoroscopy itself, of course, is quite another matter and gives a very high dose.

CONCLUSIONS

From the above, certain tentative conclusions seem indicated.

1. Fluoroscopy should not be used for screening purpose. (It may be necessary, of course, for diagnostic purposes.)
2. Any X-ray program yielding data of no significance should be discontinued. (A given type of X-ray program may be justified in a certain population group and unjustified in another.)

3. In very few communities, if any, in the United States would routine chest X-ray screening of the general population *under the age of 15* be justified.

4. From the genetic standpoint, chest X-rays of older people who have completed their families are of no importance, and furthermore, this is the group with the higher rates of prevalence of tuberculosis.

5. The standard 14"x17" chest X-ray film gives such a low dosage of gonadal radiation it is essentially negligible at any age.

6. The use of the new photofluorograph camera using the mirror type of optics results in less than a third as much gonadal radiation as the regular photofluorograph.

7. Even the regular photofluorograph causes such a low dose of gonadal radiation that its use for tuberculosis screening purposes in individuals who have not completed their families is justified if these individuals are in population groups with a considerable prevalence of tuberculosis.

8. Determination of what groups should be continued to be screened by chest X-rays must be made locally upon the advice of the physicians guiding the program, such as the Trudeau Society or medical advisory committee.

PERSONALS AND NEWS ITEMS

Dr. Joe Hutchison has opened an office at Hazen and will practice there. He practiced at Gravette for a year and has been practicing most recently at the Hathcock Clinic in Fayetteville.

A native Arkansan, **Dr. J. M. Gowdy**, has opened his office in Clinton and will do general practice and surgery. Dr. Gowdy was born at Pine Bluff and attended Arkansas schools. He comes to Clinton from St. Louis.

Dr. T. E. Rhine, veteran Thornton doctor, was awarded a plaque as the Fox Hunter of the Year at the annual meeting of the South Arkansas Fox Hunters Association held between Stephens and Mount Holly.

Opening an office in Marianna is **Dr. E. C. Knowell**, daughter of Mrs. W. S. Crawford and the late Dr. Crawford of that city. Dr. Knowell graduated from the University of Mississippi, the University of Arkansas Medical School and studied at Tulane University. She interned at the University Hospital in Little Rock.

Dr. W. P. Kolb, director of research and education at the State Hospital in Little Rock, spoke at the Stuttgart Rotary Club, Tuesday, October 30. Dr. Kolb's subject was mental diseases and treatment of mentally disturbed patients.

The Mountain Home Rotary Club sponsored a community service program Tuesday night, November 6. **Dr. Edgar J. Easley** of Little Rock, president of the Arkansas Heart Association and assistant state health officer, delivered an address.

J. Warren Murry of Texarkana was initiated as a fellow of the American College of Surgeons at the October meeting.

Dr. Ben Saltzman of Mountain Home, president of the Arkansas Academy of General Practice, spoke at the annual fall meeting of the Jefferson County Council of Home Demonstration Clubs. He spoke on the topic, "Health Is Everybody's Business."

The Southern Medical Association held its Golden Anniversary meeting in Washington, D. C., November 12-16. **Dr. Fount Richardson** of Fayetteville was elected vice-chairman of the Council. **Dr. Willis E. Brown** of Little Rock is a member of the editorial board.

Listed among the scientific awards for honorable mention was the Pediatric Urology exhibit of **Drs. Sam Jameson, Schuler McKinney** and **James O. Cooper** of El Dorado.

Arkansas physicians attending the meeting were: **Drs. Fount Richardson**, Fayetteville; **Willis E. Brown**, Hoyt Choate, Herschel F. Gray, Tom Johnston, F. H. Jones, Jerome Levy, Joseph A. Norton, William S. Orr, Jr., Vernon L. Toombs, J. Royston

Brown, James D. Carter, W. G. Cooper, Jr., John T. Riggin, all of Little Rock; **D. W. Goldstein, W. E. Knight, F. E. Shearer**, of Fort Smith; **Roy I. Millard** of Russellville; **H. King Wade, Jr., Thomas M. Durham, Dorothy Goetze** of Hot Springs; **L. H. McDaniel** of Tyronza; **N. E. Fraser** of Conway; **Sam Jameson** of El Dorado, and **Charles G. Smith** of Texarkana.

MINUTES OF THE COUNCIL OF THE ARKANSAS MEDICAL SOCIETY

COUNCIL MINUTES

Hotel Marion, Little Rock

November 18th, 1956

The Council of the Arkansas Medical Society met at the Hotel Marion in Little Rock immediately following the House of Delegates meeting on the afternoon of November 18th. Present were: **Hundley, Dalton, Norton, Fowler, Smith, Brown, Roy, J. Shuffield, Kolb, Monfort, E. Shuffield, Ellis, Verser, Mr. Deisch, Mr. Warren, and Mr. Schaefer.**

The Council transacted business as follows:

- I. Chairman **Hundley** reviewed the Medicare Fee Schedule which had been negotiated by the Executive Committee in Washington on November 7th. Upon the motion of **Roy** and **Dalton**, the schedule was unanimously approved.
- II. **Hundley** then discussed the steps necessary to implement the handling of the program through the Society headquarters, pointing out the possible need for additional personnel, space and equipment. Upon the motion of **Kolb** and **Norton**, the executive secretary was given authority to spend up to \$2,000 for equipment, rent necessary additional space and hire additional personnel. By the same motion, the executive secretary was authorized to transfer \$10,000 to a separate Medicare Fund to be used in the payment of physicians' fees.

Louis K. Hundley, M.D.
Chairman

PROCEEDINGS OF SOCIETIES

Drs. Gardner Landers and **Charles Cyphers** of El Dorado, led a scientific discussion of treatment of eye, ear, nose and throat conditions in general practice at a meeting of the Fourth Councilor District. The meeting was held at the Ridgeway

Hotel in Monticello, October 22. Dr. L. K. Hundley of Pine Bluff presided over the meeting and led a discussion on "Medicare."

At the annual meeting of the Arkansas Obstetrical and Gynecology Society held in Little Rock, October 27-28, Dr. Haynes G. Jackson of Hot Springs was elected president. He succeeds Dr. John Walter Jones of Texarkana. Dr. Robert F. McCrary, also of Hot Springs, was elected secretary-treasurer.

The Craighead-Poinsett County Medical Society met at Jonesboro, November 7th. Dr. James Growdon of Little Rock spoke on "Carcinoma of the Oral Cavity." "Office Practice of Urology" was discussed by Dr. James W. Headstream of Little Rock and a paper on "Blunt Trauma of the Abdomen" was given by Dr. John C. Baber, Jr., of Little Rock.

Contributors to the AMEF from the State of Arkansas, October, 1956: Dr. E. M. Cooper, Jonesboro, \$10.00.

SPECIAL MEETING, HOUSE OF DELEGATES ARKANSAS MEDICAL SOCIETY

Hotel Marion, Little Rock, Arkansas
November 18, 1956

The House of Delegates of the Arkansas Medical Society met in Special Session at the Hotel Marion in Little Rock at 1:00 p. m. on November 18, 1956.

President Fount Richardson opened the meeting with a statement explaining that the meeting was called to arrive at a legislative program and to instruct the Legislative Committee of the Arkansas Medical Society regarding the Society's wishes for legislation during the 1957 meeting of the Arkansas Assembly.

Speaker of the House, C. C. Long, announced that there would be a short meeting of the Council immediately following the House of Delegates. The roll was called.

The Speaker recognized Joe Shuffield, Chairman of the Legislative Committee, who spoke briefly on the necessity of the members of the Society being united in whatever legislative measures were presented to the Assembly. Shuffield then asked Mr. Eugene Warren to review the proposed new Arkansas Medical Practices

Act. The new act was read, discussed, and amended or approved a paragraph at a time. Upon motion of Kolb and Dalton, the House of Delegates voted to request the Legislative Committee to present the new act, as amended, to the Legislature for its approval. The House voted to give its unqualified support to this measure. Upon the motion of Verser and Shuffield, the House voted to request H. J. Hall of Clinton, a new member of the House of Representatives, to present the measure—to be known as the Hall Bill.

After considerable discussion of a measure calling for the registration with the State Board of Health of all medicine sold in the State, upon the motion of Richardson and Kolb, the House voted to request the Legislative Committee to investigate the measure and report its findings to the Council for the Council's recommendation.

It was decided, upon a motion of Verser and Fowler, that the State Medical Society would take no position regarding the problems of the State Hospital.

James M. Kolb spoke requesting instructions as a member of the AMA House of Delegates. He discussed the new Principles of Medical Ethics, with special reference to the section which would prohibit doctors from dispensing. He stated that he thought this section was too restrictive and that he favored the present code as it affected this part of the practice of medicine. The House agreed with Kolb and, upon motion of Dalton and Monfort, instructed him to work for the amendment of this section of the new Principles.

At the request of Joe Shuffield, Provost F. Douglas Lawrason explained the necessity for increasing the size of the Medical Center budget, pointing out the increased costs of operating hospitals, not only in Arkansas but also all over the United States. He requested the full support of all physicians in Arkansas in obtaining the necessary appropriation.

Louis Hundley gave a brief explanation of the status of the Military Dependents' Medical Care Program, announcing that a schedule and a contract for the administration of the program had been agreed upon and signed in Washington on November 7th. He pointed out that the catalogue of procedures and the Arkansas fee schedule might not be received from the government until after December 7th, the beginning

date for the program. Hundley explained that physicians' claims should be sent to the Arkansas Medical Society Headquarters in Fort Smith and that the Society will pay the physicians. Once each month, the Society will be reimbursed by the government.

The House adjourned at 4:30 p. m.

Paul C. Schaefer,
Executive Secretary.

Woman's Auxiliary

Woman's Auxiliary to the Pulaski County Medical Society sponsored a benefit card party, November 5, in Little Rock. Proceeds will go to the American Educational Foundation Fund. Mrs. Robert Calcote and Mrs. Hoyt Choate are co-chairmen with the following committee: Mrs. John Adametz, Mrs. J. E. Murphy, Jr., Mrs. Melvin McCaskill, Mrs. A. J. Brizzolara, Mrs. Robert Carnahan, Mrs. Masuki Hara, Mrs. Hal Black and Mrs. Harlan Hill. Medical Dames, wives of the medical students, assisted with this benefit by having a candy sale, with Mrs. Clyde Whaley, president, as chairman.

The president of the Arkansas Medical Society Woman's Auxiliary, Mrs. L. Gardner, of Russellville, was honor guest and the program speaker at the October luncheon meeting of Sebastian County Medical Society Auxiliary held Monday, November 5, in Fort Smith. Her talk, entitled "Bees in Your Bonnet," had to do with various phases of the auxiliary work throughout the state. She also reported on the conference of presidents and presidents-elect she attended in Chicago, Ill., in October. Hostesses for the luncheon were Mrs. A. S. Koeing and Mrs. Louis Lambiotte.

The Ouachita County Medical Society held its monthly dinner-business meeting Thursday night, November 1, in Camden, with Mrs. L. Ozment, president, presiding. There were 9 members attending. Reports from the various committee chairmen were given and projects for the coming year were discussed.

The Boone County Medical Auxiliary met Tuesday evening, November 6, in Harrison with its president, Mrs. William P. Barron, presiding. Mrs. L. Gardner of

Russellville spoke on the aims and functions of the American Auxiliary. Mrs. Jack Kennedy of Arkadelphia, state president-elect, and organizing chairman, spoke on the organizational work.

BOOK REVIEWS

Diseases of the Heart: Charles K. Friedberg, M.D. W. B. Saunders Company, Philadelphia and London. September 20, 1956. Pp. 1161. \$18.00.

Clinical and experimental research into diseases of the heart has inevitably broadened our field of knowledge with a resulting necessity for lengthening and expanding of the amount of material put in our textbooks on heart disease. In 1945, Dr. Samuel Levine's text was 462 pages; a 1938 edition of Dr. Paul Dudley White's text on heart disease was 744 pages; and Dr. Friedberg's textbook is 1,161 pages. In addition to introducing new laboratory techniques in the study of heart disease some of the length in Dr. Friedberg's book is the result of rather long, although excellent bibliographies, the introduction of physiological concepts, discussions of surgery of the heart, etc. The discussions on Vectorcardiography and Ballistocardiography are of particular interest as they are condensed accurate information on a subject which is difficult to grasp by studying the diffuse sources in the literature. The information on cardiac catheterization is rather brief. As noted above, cardiac surgery is discussed where applicable. There is a good description of the actual technical procedure in a mitral commissurotomy. All in all, this is an excellent extensive reference on heart disease of value to the specialist and the general physician.

A.K.

Of Water, Salt and Life: Lakeside Laboratories, Inc. Milwaukee, Wisc., 1956, 72 pp. \$7.50.

This beautifully illustrated book shows in clear, graphic fashion many aspects of normal and abnormal electrolyte and water metabolism. Graphic aids of this type make the understanding of difficult chemical problems far easier. This book, while informative and well turned out, is in no way a substitute for a textbook of biochemistry. Rather, it is a complementary book. The only fault that one could find with this monograph is that its cost places it out of the reach of the medical student for whom it would hold the greatest interest. The general physician would enjoy this book.—A.K.

Ciba Foundation Colloquia on Endocrinology: Volume 9. Internal Secretions of the Pancreas. Editors for the Ciba Foundation, G. E. W. Wolstenholme and Cecilia M. O'Connor. Little, Brown and Company. Boston. Pp. 292. \$7.00. 1956.

This Ciba symposium was participated in by outstanding authorities on endocrinology. The discussions are on a research level and are not planned as a clinical discussion. This book will, therefore, hold little interest for the practicing physician, except those in internal medicine. It is a highly valuable contribution for those in diabetic research. The internist will enjoy reading about recent developments on Glucagon. There are excellent chapters on the action of insulin.—A.K.

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Why And How To Take Care Of Premature Infants*

CLEMENT A. SMITH, M.D.**

To the pediatrician it seems unnecessary to justify the effort and time which go into keeping a two-pound infant alive and helping him grow to the same size and strength he would have achieved if born at term. No one whose professional life is concerned with the growth and development of seven-pound infants could resist the challenge to his skill of one born less than half as big and presumably not half so well-developed.

On the other hand, in an era when the costs of hospital and medical care have risen so enormously, it seems reasonable to anticipate some honest and intelligent questioning over the relatively large expense—often of the public's money—which may go into the special care of such babies. Certainly the expense would need a little more justification if the long, hard job of caring for such babies was unlikely to be successful, or if it succeeded only in saving the infant's life at the expense of normal mental development. The first question raised by the preceding sentence can be answered by the figures in Table 1. Such mortality records are at least good enough to justify us in continuing to save the 80 or more prematures who are now able to survive among every hundred delivered—and in trying to save more of the others as well.

As to the question whether these infants may be intellectually or otherwise capable of leading normal lives, the chances are certainly strongly in favor of that possi-

bility. Admittedly, the incidence of prematurity appears to be significantly high in children with cerebral palsy or other more-or-less fixed lesions of the nervous system. But retrospective analysis of children who are mentally or neurologically abnormal will never find the larger group of premature infants who develop normally. Thus, even if neurological lesions occur three times as commonly in premature as in term infants (and a difference of this general order may well obtain) the likelihood of any individual premature infants being thus handicapped would still be a good deal less than one in ten. The results of taking care of premature infants are good enough to indicate that lay and medical society gets a very good return on money and time so spent. And, if we can be for the moment inhumanly mathematical about it, the investment is obviously much sounder than one devoted to preserving life at its extreme other end.

A more straightforward medical argument for giving expensive care to premature infants is that this is now the most effective way of reducing infant mortality. The effectiveness of the doctor to his community can be measured by several convenient statistical yardsticks, one of the best of which is the number of liveborn infants who live to celebrate their first birthdays. Expressed per thousand, this number has been brought down from 150 or so in our own professional lifetimes to some 20-40, but it is becoming harder and harder to get it down further. Most of the infant mortality is now concentrated during the

*Presented at the 80th Annual Session, Arkansas Medical Society, Little Rock, April 24, 1956.

**Associate Professor of Pediatrics at Boston Lying-in Hospital, Harvard Medical School.

first two weeks or first month after birth. In this most dangerous period of life, 50 per cent or more of the deaths occur in the small percentage of infants born prematurely. Put simply, in the Boston Lying-in Hospital, with about 5,000 livebirths per year, 70 per cent of our newborn infant mortality is drawn from the groups of infants born prematurely — and these are only 7 per cent of all our births.

But there is perhaps an even more compelling reason for concentration of effort on premature infant care. My colleague, Dr. Stewart Clifford, has pointed out how often prematures are “extra-value” babies. Of course, in the eyes of the nurses and doctors, all babies should be of the same value. To parents most babies represent about the same investment of maternal hope, fear, and inconvenience, if not disability — the 280 days of gestation. Prematures represent less than 280 days gestation, but they are commonly the only living results of several repeated pregnancies, the others of which have ended in miscarriage, stillbirth, or birth of an infant so premature as to be actually non-viable. Any infant born after 5 to 10 years of intermittent unsuccessful pregnancies—with perhaps no further pregnancies to follow—is particularly precious to its parents and therefore worth all possible efforts by nurses and doctors.

So much for the “why” of caring for prematures. It must be admitted that we don’t entirely know *how* to do this job. If we did, perhaps the mortality shown in Table I would not be as low as for full-term babies, but certainly it might be lower. I can only tell you, then, how we believe the best results are to be obtained under our present inadequate knowledge. As a beginning, we might ask *where* to take care of premature infants.

There are three answers to that question. In some parts of the world — notably in England—plans for taking care of premature infants are based, by choice, on doing so in their homes. Dr. Mary Crosse, of Birmingham, has established an enviable record under a program in which only the smallest and youngest prematures are hospitalized, and even these may be sent home after a few days or weeks of nursery care have shown that they are able to survive. The essential link between the doctor and the infant is the specially trained Visiting

Nurse, who carries to the home the same skills as are used by nurses in our hospital premature infant nurseries.

A second plan is care in the hospital where the infant is born. Obviously this pre-supposes that the infant will co-operate by being born in a hospital, but where more and more full-term infants are born in hospitals, more and more prematures will also be born there. In most Maternity Hospitals (or general hospitals with sufficiently large maternity services) enough premature births occur so that a premature infant nursery can be operated with semi-permanent and specially trained group of nurses, whose time can be effectively utilized. Such an arrangement offers the best place to take care of premature infants. They are delivered by an experienced obstetrical staff in properly equipped delivery rooms. They can be brought immediately to the premature nursery. The mother is available for instruction, breast pumping, and general development of her relationship to the baby, which may be neglected if she is at home or in another hospital. Finally, the baby is in contact only with other infants who have also been brought directly from sterile delivery rooms; therefore, the risk of cross-infection from an infant with an unsuspected infection is greatly reduced.

A third place for taking care of premature infants is a special nursery set up in some central situation, usually a hospital of some sort, selected in part for its equipment and staff, and in part because of its key location. This system requires some method of transportation from place of birth to the center, which need not be elaborate if it is safe and prompt. If centers are carefully planned and strategically located, they may offer the most efficient application of skilled nursing time. On the other hand, this system entails the risks that infants may suffer from aspiration of food during well-meaning attempts to feed them before they are taken to the nursery; or may cross-infect one another after their arrival. The mortality rates achieved in such nurseries may be artificially lowered because the most feeble infants do not live long enough to reach the center; on the other hand, the largest infants with the best outlook are often not brought to such nurseries.

From some one of these three arrangements, that plan best suited to the locality

can be selected. Whatever this is, the same general principles of *how* to take care of premature infants will apply to it.

The first principle is that during the most crucial period—which is the first 48 hours after birth—the purpose of care is to provide safe surroundings where the infant can adjust to extra-uterine life with a minimum of unnecessary disturbance. During this time he does not have to grow, nor to eat, nor to drink. Essentially, he has to stay alive, warm—but not too warm—and free from dangers of infection or aspiration, while his heart, lungs, and kidneys begin to act like those of a fetus.

Actually the most important factors in the infant's survival during this crucial adjustment period are already in the past—the *normality* or abnormality of his intra-uterine life and the skill and gentleness of his delivery from it. One part of our job in caring for premature infants is therefore that of improving the local practices of prenatal care and obstetrics—which includes our own personal practices as a part of those of the general medical community.

Once the infant is delivered and has begun these first 2 or 3 days of adjustment the few things that can be done are essentially in the field of nursing care: observation for jaundice, bleeding, cyanosis or apnea or abnormal temperature; suction of mucous and any other fluid from the nose and pharynx; change of posture for easier breathing; intelligent provision of oxygen and recording of its use, its concentration and effectiveness, and, perhaps as important as any other nursing job, the occasional stimulus needed by some apathetic and semi-apneic infants, of gentle rubbing or tapping the feet to make the baby cry. Many a premature infant has survived because by these little tricks of management an observant, attentive, and experienced nurse has not allowed him to forget to breathe, or has made better use of the breathing he is remembering to do.

The various symptoms or signs listed in the paragraph above begin with mention of jaundice. It is well known that the physiological jaundice of the newborn is more frequent and severe after premature birth than after term birth, so icterus need not of itself be considered reason for action. Since icterus may also result from other causes,

some of which have a worse outlook in prematures than term babies, its presence calls for consideration of maternal-fetal blood incompatibility, sepsis, and perhaps cytomegalic inclusion body disease, as possible causes. In a general way, the earlier the onset or the more prolonged the course, the greater is the likelihood of such causes. Their diagnosis and treatment cannot be discussed in this brief talk—but neither of these will be possible if the jaundice is not observed and the doctor not alert to its implications.

Discussion of bleeding—petichiae, ecchymoses, melena, vomiting of blood, hemorrhage from the cord stump, and so on—in premature infants also requires more time than can be given here. But when bleeding occurs we think especially of hypoprothrombinemia and infections as causes, since these are the ones we might affect by treatment. While we have been willing to give up routine administration of Vitamin K to mothers or infants at full-term birth, we usually give it, intramuscularly, to prematures, especially those with any sign of hemorrhage. In a nursery whose infants are all born in the same building so that we can rule out the probability of infection, we would not advise any routine use of anti-microbial prophylaxis. In a nursery which receives infants born under unknown circumstances elsewhere, routine “prophylactic antimicrobial therapy” may be more justifiable. At present, we have enough concern about the misuse of such drugs so that we try to individualize such treatment. I may say, in passing, that we have not found any ideal combination or single broadly-effective drug to use when we feel that such therapy is indicated.

Cyanosis, apnea, and the whole group of respiratory disturbances are not only the most common problems but perhaps also those least understood. As generalizations, it may be said that we have been able—as has everyone else—to reduce the frequency of retrolental fibroplasia greatly without increasing mortality, by giving up any routine use of oxygen. On the other hand, we have not been convinced that atmospheres of more than 40 per cent oxygen may never be needed, or that those of less than that percentage are never associated with subsequent retinopathy. We try to have our

staff use oxygen as they would use intravenous therapy in older infants: for clear reason, in measured and recorded amounts, and never unnecessarily. Probably half our infants of less than $3\frac{1}{2}$ pounds (and the large majority of those above that weight) are never given any extra oxygen. For the rapid and difficult breathing which may terminate in death with resorption atelectasis and hyaline material in the lungs, we would administer oxygen if the infant's color was thereby improved, and especially if his breathing were more regular and less interrupted when atmospheric oxygen was increased.

Spells of apnea and cyanosis occurring in the absence of difficult breathing and scattered rales, usually suggest to us the possible presence of central pathology—most often spontaneous intra-ventricular hemorrhage. This is a serious development which we have not learned how to prevent or to treat. The diagnosis is usually suspected when sudden and increasing evidences of central respiratory failure occur after a fairly good beginning, and is most commonly proved by autopsy.

Temperature regulation requires a plan, fully as much as it requires a thermometer and some source or means of increasing or conserving heat. Our plan is based on the greater desirability of a stable temperature than of one at a normal adult level. Axillary temperatures are taken in our nurseries, as avoiding the unnecessary introduction of anything into the gastrointestinal tract from either end. The nurses usually find that stabilization within a range of \pm one degree F is possible at 94 to 96 degrees in a 2 to 3 pound premature, but impossible at 97 to 99 degrees. Accordingly, we allow the lower temperature range. It *may* save some energy and oxygen required when the body is kept at a higher temperature.

After 2 to 4 days, during which the factors just mentioned have been of major concern, a new one is added by the need for water and calories. In general, our feeling is that a premature infant who survives long enough to begin feeding should be able to live thereafter. In other words, the type of food the baby gets rarely determines whether he will live or die. It does to some extent determine the character of

his growth, but since he has extra months before him in which to grow, that factor need not significantly affect the choice of food offered during the first few weeks after birth.

About 75 per cent of our deaths associated with prematurity occur in the first 48 hours after birth, usually either from some form of respiratory failure, or from intra-cranial hemorrhage or both. Almost all of our infants who live for 5 days continue to do so. This suggests to us that the feeding programs in use are at least adequate. It is our impression that, provided the food of a premature infant is clean, sterile, and of reasonably conventional composition, the mechanical aspects of its administration are more important than the exact distribution of its calories. Moreover, we would suppose that more harm may arise from feeding too much and too early than too little and too late. Other principles of our feeding program are based on the impression that increases and changes in food should be very gradual, that human milk is a good food for prematures, and that some of the increase in weight gain often seen in infants when their food is changed from human to cow's milk may represent only the temporary retention of excess water accompanying electrolytes not immediately excreted by the immature kidneys.

Therefore our general plan is to begin, usually sometime on the third day, with 1 to 2 drams (5 to 10 ml.) of 10 per cent glucose and water, increased gradually to an amount of 15 to 30 ml. ($\frac{1}{2}$ to 1 ounce) per feeding and then replaced 4 ml. or 1 dram, at a time with breast milk. If breast milk is not available, various formulae are given in the standard textbooks. The principles need not be routinized—indeed one essential of good nursing care of prematures is individualization according to their needs and tolerance. Although our preference is for feeding by gavage with a No. 10 catheter inserted through the mouth into the esophagus for each feeding, the placing of a polyethylene tube into the stomach to be left there for 3 to 5 days during which food is given by glass syringe, works very successfully.

Interval between feedings again should be individualized. As a rough rule, infants

of approximately 2 pounds are often most easily managed with a two - hour feeding interval, those of 3 pounds three hourly, and of 3½ pounds or more on a four hourly feeding schedule, but good nurses will be able to suggest many useful departures from this generalization. Again, as a rough rule, the infants in our nurseries are usually receiving a b o u t 30 to 50 calories per pound per day at one week of age, and 50 to 70 at two weeks.

The needs for vitamins and for additional iron (if any) can be supplied according to the standard textbooks and the individual requirements of the infant. These will not be presented here, inasmuch as they are largely matters which begin to concern us in the third week or thereafter, when there is m o r e time available for plotting the course the infant must follow in order to achieve normal growth with less than the normal original endowment of minerals for building tissues. These matters are of course important ones in the care of premature infants, but they are somewhat less urgent than those requirements discussed above, which may affect survival during the earlier and more dangerous period.

In conclusion, the key role of the experienced nurse deserves a f i n a l stress. If

money is to be spent—as it must and should be spent—on caring for premature infants, expenditure for the training and employment of expert nurses should come before that for purchases of elaborate incubators. Finally, not only the medical profession but also the citizenry can do much to assure the success of any program for premature infant care by their interest in these “over-value” babies.

TABLE I
APPROXIMATE EXPECTED INCIDENCE OF
PREMATURE BIRTHS, AND OF NEONATAL
MORTALITY, BY WEIGHT GROUPS

Birth Weight	Percentage of all Live Births	Mortality Rate in Weight Group
<5 lb. 8 oz. (2500 g.)	6-8%	15%
>5 lb. 8 oz. (2500 g.)	92-94%	0.1-0.5%
<hr/>		
	(Percentage of Prema- ture Births)	
4 lb. 6 oz. (2000 g.) to 5 lb. 8 oz. (2500 g.)	67%	4-5%
3 lb. 5 oz. (1500 g.) to 4 lb. 6 oz. (2000 g.)	20%	20%
2 lb. 3 oz. (1000 g.) to 3 lb. 5 oz. (1500 g.)	8%	50%
<2 lb. 3 oz. (1000 g.)	5%	80%



Common Obstructive Congenital Lesions Of The Urinary Tract

RALPH A. DOWNS, M.D.*

Congenital anomalies play a disturbing role in child and infant mortality and morbidity. In infants, under one year of age, these deformities are the second most common cause of death.

Congenital anomalies occur more frequently in the genito-urinary tract than any other system, since it has a dual origin arising from both the mullerian and wolffian ducts. These two systems must merge accurately and at the right time to form a normal genito-urinary tract; consequently chances of error are greater in this system than other systems that are derived from only one embryological process. Thirty to forty per cent of all congenital anomalies, that are recorded, occur in the genito-urinary tract.

Since the genital and urinary tracts have a common source in both sexes, congenital deformities of the external genitalia are frequently associated with anomalies of the upper urinary tract. An example of this is the very common association of renal lesions with absence or atresia of the vagina (1). By the same token, sixty-five per cent of the female cases of solitary pelvic kidney, that have been reported, had vaginal abnormalities (2).

DIAGNOSIS

The majority of abnormalities of a child are diagnosed through the investigation of pyuria or the signs and symptoms that are produced by infection of the urinary tract. In many cases, these abnormalities are "silent" until they are complicated by infection. Even if symptoms are present, they are often hard to detect and evaluate in small children. When the abnormalities are in the lower urinary tract, at the bladder neck or distal to it, obstructive symptoms, such as straining and slow stream, may be obvious. It is not uncommon, however, to

find children whose kidneys have been partially destroyed by obstructive lesion before symptoms occur.

These deformities are usually easily diagnosed with the use of the common urologic diagnostic tests. To start off, it is essential to examine a properly obtained urine specimen in the children, as well as in the adult. The second glass specimen should be examined in the male and a catheterized specimen in the female; no matter what the age of the child is. Obtaining a urine specimen in this manner, the normal contaminants of the male urethra are dispensed with in disposing the first glass specimen and the likelihood of contamination from vaginal secretion in the female is avoided by catheterization.

The preliminary X-rays, to adequately screen a child suspected of having a congenital lesion, should include KUB, intravenous pyelogram and a cystogram. An intravenous urogram alone is inadequate, since in most cases it does not rule out lesions of the lower ureters or bladder. A cystogram, which is done by simply filling the bladder through a catheter under gravity flow with 5 per cent sodium iodine, supplies the additional information desired. If these preliminary X-rays reveal any abnormalities, then cystoscopy and retrograde pyelograms are definitely indicated. It should be urged, at this point, that an intravenous pyelogram should never be done without doing a KUB prior to the administration of the intravenous dye; since a small stone may be obscured by the dye. Figures I, II and III reveal a normal KUB and intravenous pyelograms. Fig. IV represents a normal cystogram and Fig. V represents a retrograde pyelogram.

Abnormalities of the cystogram are noted by deformities in the size, shape and position of the bladder, as well as the presence of "reflux". This is to be shown later in some of the abnormal cystograms. This phenomenon occurs when the ureterovesical "valve" becomes incontinent due to in-

*100 South 14th Street, Fort Smith, Arkansas.

The cases presented in this paper are those that were shown on exhibit, of the same title, at the Arkansas Medical Society Meeting in Little Rock, Arkansas, April 23 through April 25, 1956.

COMMON OBSTRUCTIVE CONGENITAL LESIONS OF THE URINARY TRACT



10. Downs — Common Obstructive Lesions of the Urinary Tract
Fig. I
Normal KUB



11. Downs — Common Obstructive Congenital Lesions of the Urinary Tract
Fig. II
Normal Five-Minute Intravenous Pyelogram



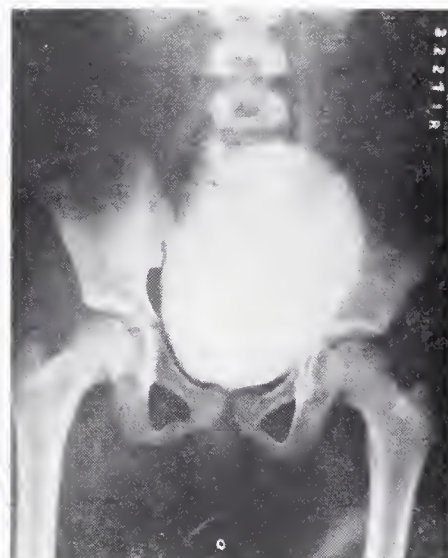
12. Downs — Common Obstructive Congenital Lesions of the Urinary Tract
Fig. III
Normal Fifteen-Minute Intravenous Pyelogram



13. Downs — Common Obstructive Congenital Lesions of the Urinary Tract
Fig. IV
Normal Cystogram



14. Downs — Common Obstructive Congenital Lesions of the Urinary Tract
Fig. V
Normal Retrograde Pyelograms



15. Downs — Common Obstructive Congenital Lesions of the Urinary Tract
Fig. VI
Cystogram Revealing Congenital Bladder Neck Contracture with Dilatation of the Bladder and Bilateral Reflux of Urine



16. Downs — Common Obstructive Congenital Lesions of the Urinary Tract
Fig. VII
Six Months Post Operative Cystogram



17. Downs — Common Obstructive Congenital Lesions of the Urinary Tract
Fig. VIII
Cystogram Revealing Massive Dilatation of the Bladder and Reflux to the Left Hydronephrotic Solitary Kidney



18. Downs — Common Obstructive Congenital Lesions of the Urinary Tract
Fig. IX
Two Months Post Operative Cystogram

creased intravesical pressure brought about by lower urinary tract obstruction, allowing the urine to regurgitate back to the kidney after it has entered the bladder. This creates devastating pressure in the upper urinary tract, which leads to hydroureters and hydronephrosis.

ABNORMALITIES OF THE URINARY TRACT

This includes lesions from the bladder neck out to the external urinary meatus. A congenital stricture of the external urinary meatus is probably the most common abnormality of the male urinary tract. It is corrected easily, and usually produces little damage to the urinary tract unless it is markedly stenotic and of long standing. It is extremely significant, however, because approximately 10 to 15 per cent of the deformities of the genitalia are associated with lesions of the upper urinary tract; consequently when one finds a stricture of the external urinary meatus, a complete evaluation of the urinary tract should be done. An example of this is the case represented by Fig. XV, which is that of an eight year old boy, whose obvious deformity was a stricture of the external urinary meatus; but on investigation, he was found to have, in addition, a stricture of the left ureter.

Valves of the posterior urethra are rare. They are detected by cystoscopic examination and can be corrected transurethraly. They are extremely destructive in nature and produce rapid damage to both kidneys.

The most common congenital abnormality of the bladder is the congenital contracture of the bladder neck. This produces gradual dilatation of the bladder and decompensation of both kidneys over a period of time. Reflux of urine from the bladder, which occurs after the valve-like action of the ureterovesical junction has been destroyed, is the mechanism which produces damage to the kidneys. Fig. VI, a cystogram, reveals bladder neck contracture with enlargement of the bladder and bilateral reflux of dye to both kidneys, with dilatation of the ureters and renal pelves. Fig. VII shows the same patient six months post-operatively with diminution in the size of the bladder and the absence of reflux.

Another interesting case of bladder neck contracture is shown in Fig. VIII. This is a nine year old boy, whose chief complaint was recurrent urinary tract infection. A cystogram shows an enlarged bladder with reflux to the left solitary kidney, which is hydronephrotic. The ureter is dilated and tortuous. There was congenital absence of the right kidney. Fig IX shows the patient two months following surgery. An open plastic procedure was done on the bladder neck and at the same time a redundant ureter was excised and reimplanted into the bladder. This latter procedure was done to straighten the ureter to insure adequate drainage from the kidney down to the bladder.

The next case of bladder neck contracture is a thirteen year old female, who came in complaining of recurrent pyuria of five years duration. The KUB, Fig. X, reveals a large bladder calculus. Fig. XI is an intravenous pyelogram, which reveals dilatation of the kidneys and ureters. Fig. XII is a cystogram revealing diverticuli of the bladder and bilateral reflux of urine to both kidneys and revealing bilateral hydronephrosis and hydroureters. This case represents all the complications of urinary tract obstruction, dilatation, chronic infection, diverticuli of the bladder, and stone formation. Six months following surgery, urograms were repeated. The intravenous pyelogram, as revealed in Fig. XIII, reveals prompt appearance of dye, less dilatation, of the kidneys and ureters, and absence of the bladder stone. The cystogram, as shown in Fig. XIV, reveals a bladder of normal size, with absence of reflux. The patient has remained free of infection and clinically has done well since the time of surgery.

URETERAL OBSTRUCTION

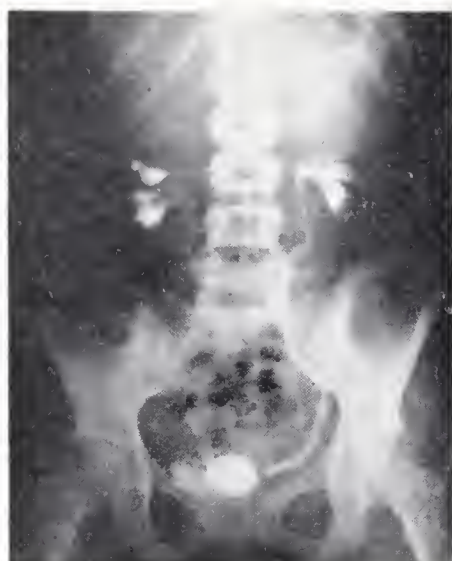
Strictures of the ureters are the most common congenital causes of ureteral obstruction. These occur most frequently at the ureteropelvic junction or at the ureterovesical junction. Congenital strictures at other points in the ureter are extremely rare. These strictures, of course, produce proximal dilatation of the ureter and kidney with the resultant kidney destruction from back pressure.

Fig. XV is a retrograde pyelogram, which shows a stricture of the left uretero-

COMMON OBSTRUCTIVE CONGENITAL LESIONS OF THE URINARY TRACT



19. Downs — Common Obstructive Congenital Lesions of the Urinary Tract
Fig. X
KUB Revealing Bladder Calculus



20. Downs — Common Obstructive Congenital Lesions of the Urinary Tract
Fig. XI
Fifteen-Minute Intravenous Pyelogram Revealing Dilatation of the Upper Urinary Tract



21. Downs — Common Obstructive Congenital Lesions of the Urinary Tract
Fig. XII
Cystogram Revealing Diverticuli of the Bladder and Reflux of Dye to Both Kidneys



22. Downs — Common Obstructive Congenital Lesions of the Urinary Tract
Fig. XIII
Six Months Post Operative Fifteen-Minute Intravenous Pyelogram



23. Downs — Common Obstructive Congenital Lesions of the Urinary Tract
Fig. XIV
Six Months Post Operative Cystogram



24. Downs — Common Obstructive Congenital Lesions of the Urinary Tract
Fig. XV
Retrograde Pyelogram Revealing Ureterovesical Stricture



25. Downs — Common Obstructive Congenital Lesions of the Urinary Tract
Fig. XVI
Fifteen-Minute Intravenous Pyelogram, one year later, Revealing Marked Reduction of the Dilatation of the Lower Left Ureter



26. Downs — Common Obstructive Congenital Lesions of the Urinary Tract
Fig. XVII
Right Ureterovesical Stricture with Marked Hydroureter



27. Downs — Common Obstructive Congenital Lesions of the Urinary Tract
Fig. XVIII
Six Months Thirty-Minute Intravenous Pyelogram

vesical junction with hydroureter and hydronephrosis proximal to it on the left side. Fig. XVI reveals the same patient, one year following surgery, with improvement of hydronephrosis and diminution in the dilatation of the ureter. Another example of this is shown in Fig. XVII, retrograde pyelogram; and Fig. XVIII shows the same patient six months post-operative with improvement of the kidney and less dilatation of the ureter. The usual treatment for these strictures, at the ureterovesical junction, is a meatotomy of the orifice, either openly through a cystotomy incision or transurethrally. When the ureter is greatly redundant or dilated, occasionally, the redundant ureter has to be excised and the ureter re-implanted into the bladder.

Strictures of the ureteropelvic junction are quite common and obstruction at this area is either due to a stricture or extrinsic pressure produced by an aberrant vessel or fibrous bands. Fig. XIX reveals bilateral hydronephrosis due to ureteropelvic strictures. The right kidney, a giant hydronephrosis, had been completely destroyed. The left kidney showed moderate hydronephrosis. A nephrectomy was done on the right side and plastic surgery was done on the ureteropelvic junction of the left kidney to insure adequate drainage. Fig. XX shows six months post-operative results.

An example of an extrinsic vessel producing pressure on the ureter and conse-

vessel was excised and a nephropexy was done. Fig. XXII shows six months post-operative results.

Another type of ureteral obstruction is the ureterocele, which is not uncommon. A ureterocele is an intravascular ballooning of the lower ureter into the bladder. This prolapse carries the meatus with it. The latter, which is stenotic, is situated at the dome of the cyst, producing marked obstruction to the flow of urine from the proximal kidney. A large ureterocele is demonstrated in Fig. XXIII, and a small one on the left side is demonstrated in Fig. XXIV. These may be removed by transurethral fulguration or open excision through a cystotomy wound.

FUSED KIDNEY

The fused kidneys occur approximately one in five hundred autopsies. These can be considered obstructive lesions since the ureters come out of the kidney at bizarre angles and locations; consequently most cases become obstructive and drain the kidneys inadequately.

In the horse-shoe kidney, which is the most common type of fused kidney, the ureters lie over the anterior aspect of the isthmus and are compressed at that point by the overlying abdominal visera. Fig. XXV demonstrates a horse-shoe kidney with hydronephrosis of the left pelvis of the kidney. There are also stones in the lower left calyx. Surgery in this case consisted of division of the isthmus, resection of the left isthmus containing the stones, pelviolithotomy and left nephropexy. Fig. XXVI a retrograde pyelogram done on the patient, six months post-operatively. On the left side, you will see that the ureter comes off the kidney, more or less, at a normal position and there is less hydronephrosis. The right kidney is lying low now that the isthmus has been severed.

PELVIC KIDNEYS

Pelvic kidneys are rare and most cases become hydronephrotic due to the fact that the ureters from these misplaced kidneys necessarily take an abnormal course to enter the bladder; consequently they are apt to become compressed by adjacent or abdominal organs. Because of this, ectopic kidneys are frequently diseased.



28. Downs — Common Obstructive Congenital Lesions of the Urinary Tract
Fig. XIX
Retrograde Pyelogram Revealing Bilateral
Hydronephrosis Due to Ureteropelvic Strictures

quent obstruction at the ureteropelvic junction is demonstrated in Fig. XXI. This

COMMON OBSTRUCTIVE CONGENITAL LESIONS OF THE URINARY TRACT



29. Downs — Common Obstructive Congenital Lesions of the Urinary Tract
Fig. XX
Six Months Post Operative Left Retrograde Pyelogram



30. Downs — Common Obstructive Congenital Lesions of the Urinary Tract
Fig. XXI
Left Hydronephrosis Due to Aberrant Vessel Crossing the Ureteropelvic Junction



31. Downs — Common Obstructive Congenital Lesions of the Urinary Tract
Fig. XXII
Six Months Post Operative 30-Minute Intravenous Pyelogram



32. Downs — Common Obstructive Congenital Lesions of the Urinary Tract
Fig. XXIII
Right Large Ureterocele



33. Downs — Common Obstructive Congenital Lesions of the Urinary Tract
Fig. XXIV
Left Ureterocele



34. Downs — Common Obstructive Congenital Lesions of the Urinary Tract
Fig. XXV
Intravenous Pyelogram Revealing Horse-Shoe Kidney with Stones in the Lower Left Calyces Produces a Filling Defect



35. Downs — Common Obstructive Congenital Lesions of the Urinary Tract
Fig. XXVI
Six Months Post Operative Retrograde Pyelogram



36. Downs — Common Obstructive Congenital Lesions of the Urinary Tract
Fig. XXVII
Unilateral Life Pelvic Kidney. The Right Kidney Was Normal.



37. Downs — Common Obstructive Congenital Lesions of the Urinary Tract
Fig. XXVIII
Solitary Pelvic Kidney

Fig. XXVII reveals a unilateral left ectopic kidney, which is hydronephrotic. This patient had a normal right kidney. This type of ectopic kidney occurs, approximately one in eight hundred cases. Fig. XXVIII reveals a solitary ectopic kidney,

XXVII, had an associated congenital contracture of the bladder neck. The solitary pelvic kidney, Fig. XXVIII, had an absence of the vagina and the crossed ectopic kidney, Fig. XXIX, had congenital heart disease.



38. Downs — Common Obstructive Congenital Lesions of the Urinary Tract
Fig. XXIX
Right Crossed Ectopic Kidney

which is extremely rare. This particular case was the 74th such case reported.

Fig. XXIX a crossed ectopic kidney is seen in which the right kidney is lying across the midline below the normally positioned left kidney.

All three of these cases had other congenital anomalies of the body. The case with the unilateral pelvic kidney, Fig.

SUMMARY AND CONCLUSIONS

1. Thirteen of the more common congenital lesions, as seen in the every day practice of urology, are presented. The diagnosis, treatment, and post-operative results are discussed.

2. All of these thirteen cases were diagnosed through the investigation of pyuria.

3. Six out of the thirteen cases or 46 per cent had multiple congenital lesions.

4. This paper is presented, primarily, to remind the practicing physicians that abnormalities of the urinary tract are common and if not detected and corrected early, they will lead to serious renal damage.

5. Persistent or recurrent pyuria or persistent symptoms, relative to the urinary tract, should always be investigated.

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Case Report

Theca Cell Tumor

M. J. KILBURY, SR., M.D.* AND JOHN M. SAMUEL, M.D.**

CHIEF COMPLAINT

Mrs. M. S., a 58 year old white female came to the office on August 7, 1956 complaining of vaginal bleeding of five days duration. The patient stated that she had not passed any blood from the vagina for nine years. She had to wear a tampon to the office and on one or two other occasions her clothes were saturated with blood. The patient also stated that on June 30, 1956 she noticed a little blood on the tissue after urinating, but attributed this to a bladder infection.

PAST HISTORY

The patient had the usual childhood diseases, pneumonia at age one month, appen-

1953 she developed some precordial pain, and electrocardiograms revealed mild coronary insufficiency. In 1954 she had a severe attack of auricular fibrillation that resulted in an embolus and right hemiplegia. She has fully recovered from the hemiplegia except for some atrophy and slight paralysis of the right upper extremity. She is taking Quinidine Sulphate and Digotoxin daily.

HABITS

She does not use tobacco. She has occasional alcoholic drink.

MENSTRUAL HISTORY

Onset at age of 12, five days duration, 28 day interval, no discomfort, menopause in 1942 lasting five years. Last period was in 1947. One full term child age 20, two miscarriages.

MARITAL HISTORY

Married 35 years, husband in good health.

GENERAL PHYSICAL EXAMINATION

Omitted because it is irrelevant.

GYN EXAMINATION

On bimanual examination the uterus was noted to be slightly enlarged, and a hard mass was noted in the right adnexal region. Visual examination of the cervix shows a normal appearing cervix with a moderate blood flow from the external os.

PROCEDURE

At the first visit to the office a specimen was taken for a papanicolaou smear, and this was reported as negative for tumor cells. Patient was later hospitalized and a diagnostic D & C was done. The Pathological report on the tissue removed was negative for neo-plastic disease. An exploratory laparotomy was then done, and a tumor of the right ovary was found.



A. Gross picture.

dectomy at age 24, and a questionable history of rheumatic fever in childhood. In

*Pathologist and Director of Laboratories, St. Vincent's Infirmary, Little Rock, Arkansas.

**Chief of General Practice Staff, St. Vincent's Infirmary, Little Rock, Arkansas.

A sub-total hysterectomy, and bilateral salpingo-oophorectomy was done. (It was thought advisable to do the sub-total hysterectomy in order to subject the patient to a minimum amount of trauma due to her cardiac status.) The patient made an uneventful recovery, and left the hospital on her seventh post-operative day.

PATHOLOGICAL REPORT

August 14, 1956

Specimen consists of uterine scrapings.

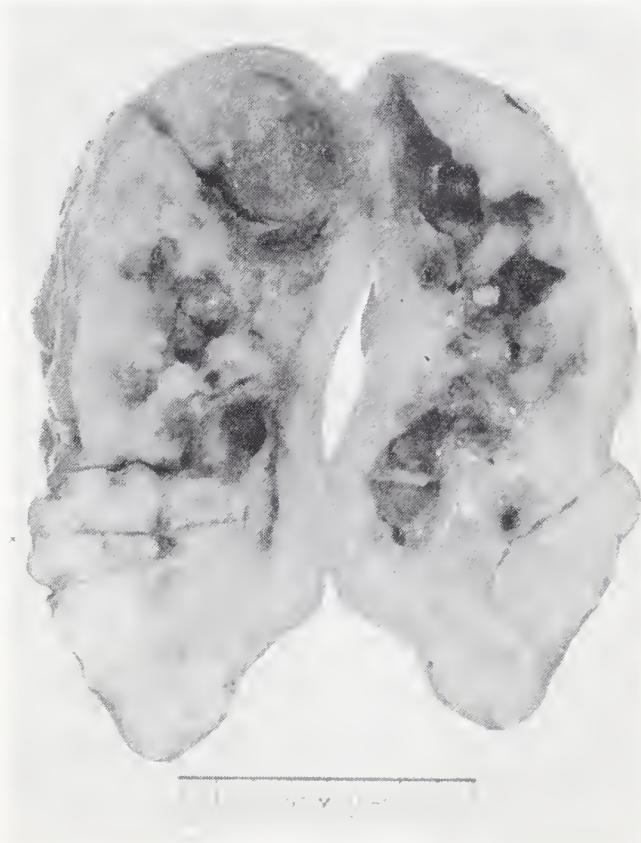
MICROSCOPIC

Sections from the uterus show very little endometrium; it is largely blood clot. There is no evidence of new growth in the sections studied.

PATHOLOGICAL REPORT

August 16, 1956

Specimen consists of uterus, both fallopian tubes and both ovaries. There is a huge tumor involving one ovary. This is



B. Gross picture showing central areas of degeneration.

10 cms. by 4 cms., and is yellow and shows numerous cystic areas in the center, and

some hemorrhagic areas and degenerative changes. The tumor weighs 130 grams. The uterus weighs 65 grams and there is a very large polyp in the endometrial canal. This is 3 cms. in length and 1½ cms. in diameter. It has undergone degenerative changes.

DIAGNOSIS: Degenerating endometrial polyp; Theca-cell tumor of the ovary.

MICROSCOPIC DIAGNOSIS

Sections from the tumor from the ovary show many parallel bands of spindle cells. These are separated by cells lying trans-



C. Lower power microscopic picture.

versely in bands. The cells are quite uniform throughout, they are of a rather thick spindle type. In some areas the nuclei stand out well, in others they are not prominent. In some areas the cells are widely separated, and there is a considerable amount of cytoplasm giving a picture of a myxomatous pattern. There is an occasional mitotic figure and an occasional outstanding nucleus. This is a benign thecoma. Sections from the tumor from the uterus show the usual picture of a polyp. There are numerous glands supported by uterine stroma. In some areas, there is considerable degeneration and small islands of red blood cells. This is a benign lesion, an endometrial polyp.

THECA-CELL TUMORS—The theca-cell tumor usually arises late in life in the postmenopausal period. It may appear at earlier times in life. It is a comparatively rare tumor. The point of origin of this tumor is a controversial subject, as well as the

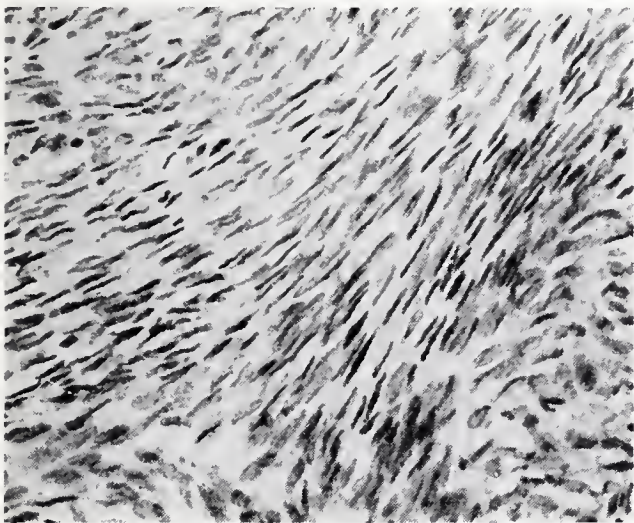
point of origin of the granulosa-cell tumor. The uterus is frequently enlarged and it may contain fibroids. One will often find hyperplasia of the endometrium. It is not unusual to find adenocarcinoma with this tumor. Uterine polyps are frequently found. In most cases, these lesions in the uterus are the result of the estrogenic secretion by the tumor cells. The theca-cell tumor, when seen in the pelvis is yellow, and of variable size usually from 5 to 10 cms. in diameter but larger ones have been found. They cut with little resistance to the knife and leave a smooth glary surface. Small cyst like cavities may be seen. This tumor is composed of connective tissue-like cells which are believed to be theca - cells. The cells are closely arranged and show many fibrillary whorl-like structures. In some areas, these cells are quite thick, in other areas these cells are rather thin. There is little tendency to produce mitotic

due to the fact that they both produce varying amounts of estrogenic hormone. The granulosa - cell tumor may appear much earlier in life in the pre-adolescent period and it may appear at any time during the reproductive period and also post-menstrually (70 per cent). The theca-cell tumor, however, is largely confined to the period after menopause (90 per cent) and is little less active, producing smaller amounts of estrogenic hormone.

The granulosa - cell tumors are said by some authors to comprise about ten per cent of the solid tumors of the ovary. The theca-cell tumor comprises not over one per cent of the solid ovarian tumors. The granulosa-cell tumor shows considerable tendency to become malignant, while the theca-cell tumor shows very little malignant tendency. Both of the above mentioned tumors belong to the group which are known as feminizing lesions of the ovary.

The granulosa-cell tumor is more likely to be diagnosed from clinical symptoms than is the theca-cell tumor. If one finds abnormal menstrual bleeding before puberty or after menopause or an increased menstrual flow during the reproductive period, one may make a diagnosis of feminizing tumor; if the symptoms are quite marked, the diagnosis of a granulosa-cell tumor should be rather strongly considered. If the tumor occurs past the menopause, such as the one reported here, one might make a diagnosis of a theca-cell tumor. The diagnosis is finally settled by microscopic study.

The prognosis in this case should be very good. There is no evidence of malignant change, and the removal of the tumor should be followed by a complete cure. The patient has returned for a check-up; she reports a complete relief of symptoms. She is enjoying good health after removal of tumor three months ago.



D. High power microscopic picture.

figures. The reticulum substance varies in different tumors. In some areas, one may see round and polyhedral cells which may resemble epithelial cells or granulosa-cells.

The theca-cell tumor and the granulosa-cell tumor are quite closely related. This is



◆ *What's* NEW ◆

PEDIATRICS

B. P. BRIGGS, M.D.*

The past year has seen further progress in the control of poliomyelitis. From the favorable reports that continue to come from all sections, it would seem likely that poliomyelitis may eventually be controlled successfully. Research work continues on this disease in full swing and, very possibly, a more effective vaccine will be developed. Research on a "live" polio vaccine seems, from all reports, to be very promising. We, as physicians, should continue to urge all patients, regardless of age group, to be immunized against polio.

One of the dramatic events of recent medicine was the discovery of the causative agent of retrolental fibroplasia. It is now possible to prevent this disorder, in most instances, by the use of lesser concentration of oxygen in the treatment of prematurity. Very likely we will continue to have a moderate number of cases of blindness in premature babies inasmuch as high concentrations of oxygen will be necessary as a life saving measure in some instances. Now that a definite cause is known we shall at least see many less cases.

Recent studies should make all physicians cautious in the use of X-ray therapy in and about the head, neck and upper chest. A rather alarming proportion of children have been found to have carcinoma of the thyroid in which a previous history of X-ray therapy to these areas had been administered. As physicians we should use X-ray therapy judiciously and, never in minor thymic enlargement. In the past X-ray therapy has been used in enlargement of the thymus, for the destruction of tonsil tissue, and in benign tumors, among other causes. Any nodular swelling of the

thyroid should be thoroughly investigated. It should also be ascertained whether X-ray therapy has been given in this general area in the past.

Another interesting observation in pediatric surgery has been pointed out in several interesting papers. It has been noted that approximately 70 per cent of children subjected to surgery for indirect inguinal hernias have later developed hernia in the opposite side. This has led several authorities to recommend exploration of the opposite side while the child is still under anesthesia. With this high an incidence of hernia on the opposite side it would seem wise to investigate in such a manner.

In the pediatric literature papers published on "peptic ulcer in childhood" are becoming more numerous. Whether the acute awareness of physicians to this disease in childhood, which was formerly thought to be rare, is the cause of the increase or whether some changes are occurring in our manner of living, remains to be established. At any rate, any child who has abdominal pain which is persistent, and in which no definite cause can be determined by a physical examination and other routine procedures, should have an upper G. I. series to determine whether or not a peptic ulcer is present. The number of cases that are discovered appear to be rather startling at times. The history, so far as diagnosis of ulcer is concerned in childhood, is much less important than in an adult. In the child the relationship between the pain and meals are not likely to be so clear-cut. We feel that if ulcers are looked for in childhood, that many more will be discovered than are apparent at this time. Certainly, the number of cases that are being found very fre-

*1417 W. Sixth St., Little Rock, Arkansas.

quently, is good evidence that ulcers in childhood are much more common than formerly realized.

Currently in pediatrics many authorities continue to stress the wise use of antibiotics, rather than the indiscriminate use of these drugs, such as is found at times. By more cautious use of antibiotics the prevention of resistant strains of various organisms may be prevented. Newer antibiotics are being introduced, and antibiotics being introduced in combinations, which are claimed to act in a synergistic form, thus enhancing the value of both drugs. While adequate control studies have not yet occurred in these newer drugs, the drugs do seem to hold promise, especially for use in some of the resistant staphylococcus strains.

Two very interesting papers have come out recently on surgical procedures for relief of portal obstructions and portal hypertension in infancy and childhood. This operation certainly warrants further investigation and it is to be hoped that future research will help determine whether or not this procedure will be a useful one in childhood. There has been opportunity to observe three such children here in Arkansas, all of which postoperatively have done well and are being followed at intervals to determine if this operation will have been of great value to these children. In one of these children with portal obstruction secondary to cirrhosis of the liver, great improvement occurred as a result of relieving the portal hypertension by a portacaval shunt. We feel like this field has only been scratched and that in the future much more

can be done for these little infants than has been done in the past.

Probably the biggest and most neglected field in pediatrics is that of accidents. Accidents are the leading cause of death in childhood and as such should receive our attention toward lowering the high mortality now existing due to such causes. Part of our advice to parents should be, to present this fact to them and to make suggestions as to how accidents could be avoided. The communities should provide proper recreational facilities which should do more to prevent accidents, than any one single factor. We as physicians can stress the fact that medications should be placed under lock and key and out of the reach of small children. Likewise, we can stress to the parents measures in the home and on the street whereby safety can be enhanced for our children. Definitely, we as physicians should play a great part in the help of the campaign to prevent accidents in childhood.

Probably one of the most important things that, we as physicians can do, is to train ourselves to treat the child as a whole and not just as a sick individual. It is no longer possible to see a child just for an illness and to think we have completed our duty, getting the child over a physical illness. We must consider the child in its entirety, including such things as his education, recreation, and his religious development. All of these things are most important to a well rounded adult and these factors receive their stimulus from early childhood. It is necessary for physicians, teachers, ministers and parents to work together as a team to completely give the child the needed care and such is the aim for pediatrics in the future.



A TEACHING SEMINAR

FROM THE

UNIVERSITY OF ARKANSAS SCHOOL OF MEDICINE

Clinical Value of Paper Electrophoresis

S. WILLIAM ROSS, M.D.*

Following the observation of Reuss, 150 years ago, that certain particles migrate in an electric field, a perfected procedure involving this principle first appeared in the work of Tiselius (10) in the 1930's. He devised a costly and complicated apparatus which separated serum proteins into components on the basis of differences in surface charge.

The instrument was so constructed that as the protein components were separated, the changes in the refractive index of the various components were recorded photographically. Since that time a number of refinements in the device have improved the resolving power. The reproducibility and the accuracy of this method of free flow or moving boundary electrophoresis remain as satisfactory as any other method of protein fractionation.

The major limitations of this method for general clinical use are the excessive time required to carry out a separation and the prohibitive cost of the equipment itself. Therefore, it has been with the innovation of paper electrophoresis during the past few years that the clinician has been supplied with a practicable method for the study of protein abnormalities in disease (11).

The principle of paper electrophoresis is inherently the same as that in the free flow-

ing method with the exception that paper is used as the supporting medium.

The instrument we have used was made locally at a cost of less than \$125.00. It consists of a power unit with a voltmeter (650 V) and a milliammeter (150 Ma) in addition to four bowls filled with a barbitol buffer of pH 8.6 and ionic strength 0.06. This apparatus is a modification of that described by Kunkel and Tiselius (6).

The circuit (Fig. I) consists of the power unit to the platinum electrode in the first bowl through the buffer and saline - agar bridges to the second bowl through the buffer and filter paper to the third bowl, through the buffer and saline-agar bridges to the fourth bowl, through the buffer and platinum electrode and back to the power unit.

Microdrops of the proteins to be separated are placed on a line across the width of the filter paper. One normal control is included. The current is turned on and fractionation ensues. As soon as the separation is completed the paper is dried and the protein stained with bromphenol blue or other suitable stain. At this stage one may merely inspect the patterns of the spots in contrast to the normal or may more accurately determine the quantities of protein in each fraction by elution and measurement of the eluent with a photoelectric colorimeter. The use of a densitometer, which measures the amount of light transmitted through the spot, is an alternative quantitative procedure.

*Assistant Professor of Medicine, Department of Medicine, University of Arkansas Medical Center, and Director, Clinical Laboratories, University of Arkansas Medical Center, Little Rock, Arkansas.

TABLE I
NORMAL VALUES FOR PROTEIN DISTRIBUTION BY PAPER
ELECTROPHORESIS OF SERUMS FROM 185 PERSONS
Jencks et al. 1956 (5)

	Alb.	Globulins				
		Alpha ₁	Alpha ₂	Beta	Gamma	T. P.
	(%)	(%)	(%)	(%)	(%)	(gm/100ml)
Average.....	68.9	2.9	7.3	9.0	12.0	7.3
Normal Range.....	60-77	1-5	4-10	5-13	7-17	5.8-8.7
(Mean — 2 S.D.)						

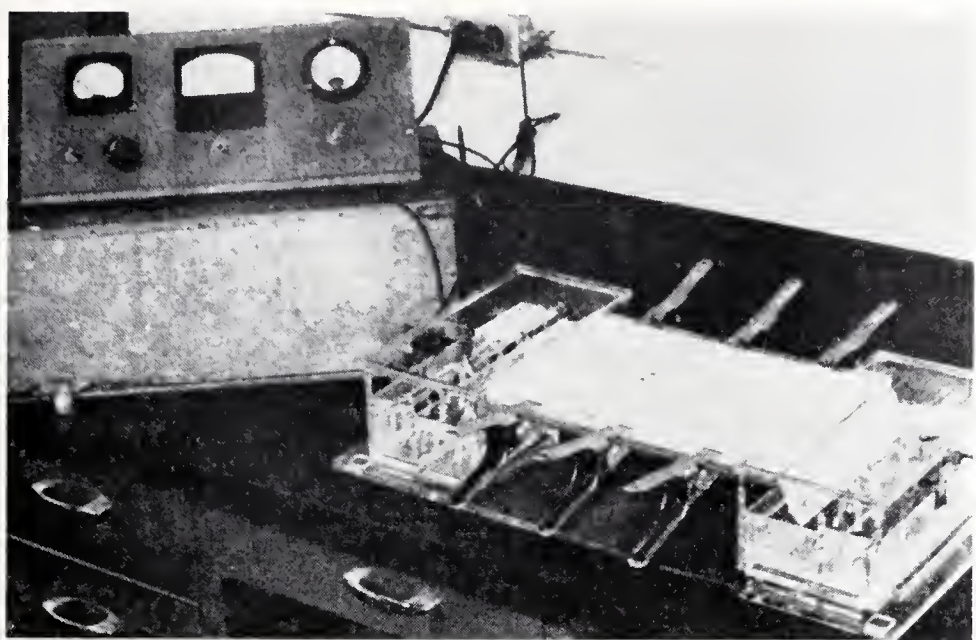


FIGURE I

Paper electrophoresis apparatus. Reproduced from article by A. J. Chernoff (1)

The normal values by this last method may be seen in Table I. It should be noted that the values for albumin are higher and those for alpha and beta globulin lower than those obtained by the moving boundary method. This is explained by:

- 1. Protein bound lipid and carbohydrate are not measured by the former.
- 2. There is a non-linear relationship between dye uptake and protein concentration within each fraction as well as between fractions (7).
- 3. There is a non-linear relationship between dye concentration on paper and scanner response (2).

- 4. There is probably some loss of albumin on the basis of trailing effect (3,4).

Variation between fractionation by salting out method, as used in most laboratories, and the paper electrophoresis procedure is accentuated by the fact that by the former method some alpha and beta globulins are separated with the albumin.

Examples of serum protein abnormalities in disease are seen in Figures II through V. Figures II and III reveal examples of abnormal protein locations in patients with multiple myeloma. These may be found anywhere from alpha, to gamma globulin. As seen in Figure III, there may be no

TABLE II
FILTER PAPER ELECTROPHORESIS OF SERUM PROTEINS
IN A GROUP OF 965 PATIENTS
Jencks et al. 1956 (5)

Diseases	No. in Group	Alb.		Alpha ₁		Globulins Alpha ₂		Beta		Gamma		Total Proteins	
		↑	↓	↑	↓	↑	↓	↑	↓	↑	↓	↑	↓
Infectious	187	1	37	8		39	2	4	1	12	1	1	8
Neoplastic	109		24	7		12	2	2		8		3	4
Cardiovascular	102		30			12		8		8	2		5
Respiratory	27		5	2		4	1			2			
Digestive system	54		9	2		7		2		9		2	1
Genitourinary	41		8	1		6		4					5
Locomotor	201	2	13	1	1	16	1	5		8		4	1
Dermatologic	45		3	1		4		2		6			
Other	200		14	4	1	4		6		7	2	4	3
TOTAL	965	3	143	26	2	104	6	35	1	60	5	14	27

changes. When an abnormal fraction appears it is highly characteristic of the disease.

Figure II reveals an instance of the nephrotic syndrome with a decrease in the total protein, albumin and gamma globulin but with an increase in the α_2 globulin. This is a pattern which is almost pathognomonic of the disease. In contrast to the latter are two examples of systemic L. E. seen in Figure IV. There is frequently a decrease in albumin and an increase in α_2 and gamma globulin. The difference in the gamma globulin concentration may be quite helpful in differentiating these two diseases.

Agammaglobulinemia with the attendant and clinically important decreased resistance to infection is readily diagnosed by this procedure and by essentially no other readily available one. The diagnosis may be suspected in an individual who tends to have recurrent prolonged bacterial infections, who has a globulin fraction below 1.5 Gm. per cent by the salting out method, and who essentially has no antibody level as measured by the febrile agglutinins or isohemagglutinins. Figure V reveals an exam-

ple of acquired agammaglobulinemia in a patient with eclampsia.

Serum protein fractionation in a large number of diseases has been studied. In many instances variation from normal values of individual protein fractions are noted. Jencks, Smith and Durrum (5) made a comprehensive survey of protein changes in a wide variety of diseases. Table II is a summary taken from their data in a study of 965 patients. The diseases are grouped into nine categories. It is readily apparent that no specific protein patterns were obtained which might distinguish one category from another. Thus in most instances changes in the protein components yield non-specific evidence of disease in a manner not too dissimilar from the erythrocyte sedimentation rate, total leucocyte count and similar procedures. Figure III reveals two examples of non-specific changes. In the serum from a patient with cirrhosis of the liver it can be seen that there is a decrease in albumin and an increase in gamma globulin when compared to the normal. In the serum from a patient with tuberculous meningitis there is an increase in gamma globulin.

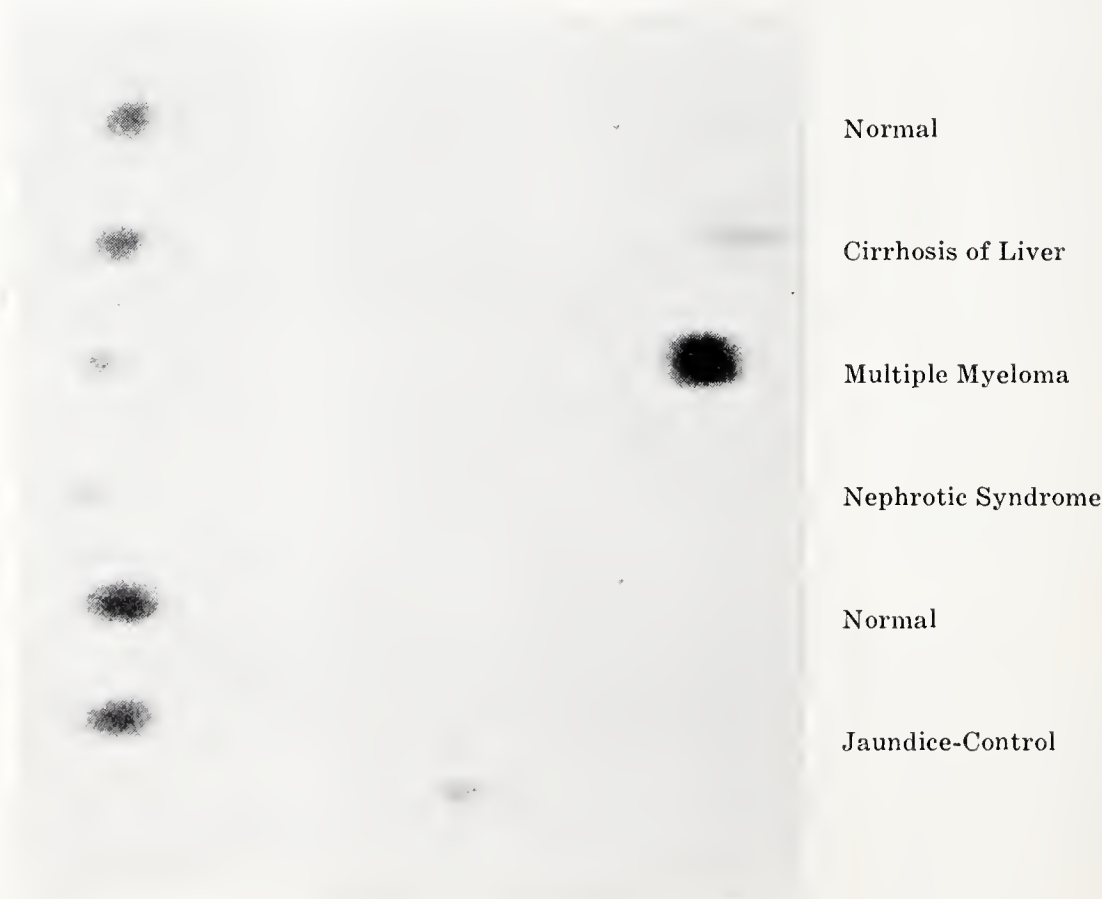


FIGURE II

It is of some interest that the data obtained by Jencks et al (5) involved use of a calibrated densitometer. Many of these abnormalities would not have been recognized by the direct inspection of the stained spots. They found that by the latter method an increase in gamma globulin was confirmed 90 per cent of the time by use of the calibrated densitometer but conversely an increase by this instrument was missed in 50 per cent of those examined by direct inspection. In the instances of change in the alpha and beta globulins this discrepancy between type of examination was even greater. The preferential method then depends on a weighing of the advantages and disadvantages of the two procedures. Marked changes in protein pattern that are fairly characteristic of diseases as multiple myeloma, the nephrotic syndrome and agammaglobulinemia are readily recognized by simple direct inspection. Lesser changes which are non-specific are more likely to be missed by direct inspection. For

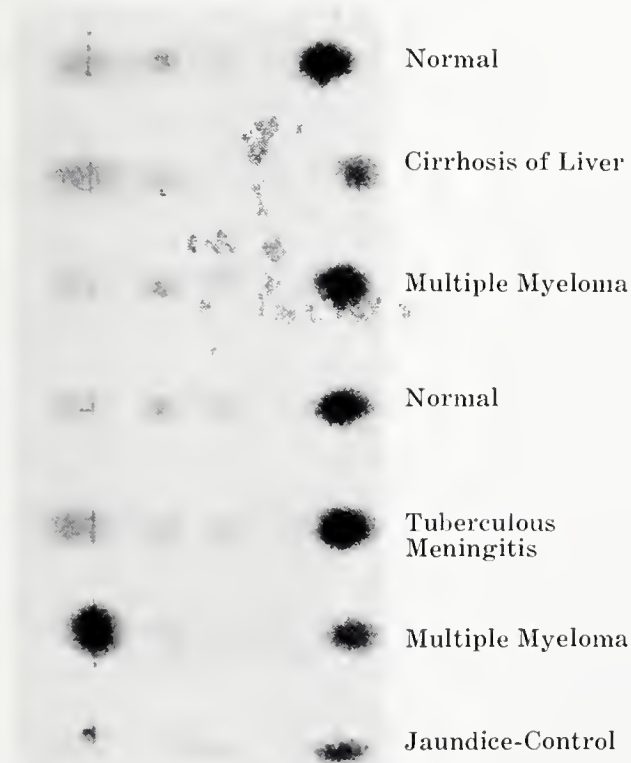


FIGURE III

general clinical purposes it would seem that the latter method would be quite adequate. An additional advantage is that less time is required for measurement and the costly densitometer is not needed.

Special study of the lipoproteins may be carried out by use of fat stains which then

give a measure of lipid content in the protein fractions. In patients with myxedema, arteriosclerosis, and nephrosis, these values are frequently elevated.

Hemoglobin is another blood protein which also provides a clinically important area for investigation by paper electrophoresis (1). Since Pauling (8) first demonstrated that an electrophoretically abnormal hemoglobin was present in patients

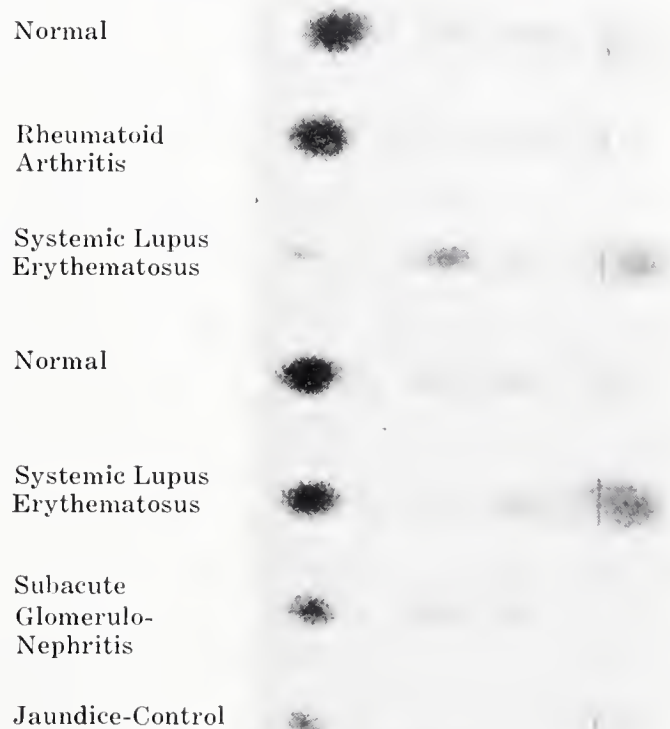


FIGURE IV

with sickle cell anemia, eight other hemoglobins associated with disease have been described. The basis for separation depends upon differences in the globin portion of the hemoglobin molecule. That differences exist here has been further verified by chromatograms of the peptides from these hemoglobins. The heme (oxygen carrying) portion is apparently normal.

The method used for hemoglobin fractionation is the same as that used for electrophoresis of the serum proteins. A hemoglobin solution is obtained by first washing the packed cells with saline, then hemolyzing them with distilled water and finally removing the stroma with toluene. Many of the problems associated with measurement of the serum protein components are not present with hemoglobin fractionation. The reason for this is that there is only one



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normal hemoglobin by electrophoresis and, therefore, the presence of any other spot is significant. The degree of quantitation necessary is very gross. This does not require any more accuracy than comparing the density of color of one spot with one other and there usually are major differences.

Figure VI reveals the relative mobility and position of the various hemoglobin spots (1). *A* hemoglobin represents normal adult hemoglobin. *F* hemoglobin is fetal or alkali resistant hemoglobin. It is normally present at birth and a small per cent may be noted up to the second year of life. After this time its presence reflects a hematologic disease but it is not specific. *S* hemoglobin is the major component in patients who have sickle cell disease or one of the variants of sickle cell disease. In sickle cell disease the remainder of the hemoglobin is

normal hemoglobins to be mentioned. In patients who have sickle cell trait *A* hemoglobin is the major component and *S* hemoglobin the minor. All of the other abnormal hemoglobins *C, D, E, G, H, I, J,* and *K,* have been found as one of the following: (1) a trait in which *A* is the major and one of them the minor component, (2) the homozygous disease which is usually a mild hemolytic disease in which one of them comprises essentially all of the hemoglobin, or (3) in combination with either sickle cell disease or thalassemia.

Paper electrophoresis has also been used in the study of protein changes in the urine and spinal fluid. The presence of gamma globulinuria for example appears to be strong evidence in favor of the diagnosis of multiple myeloma (9). Unfortunately because of the considerable dilution of protein in these two fluids, it is necessary to

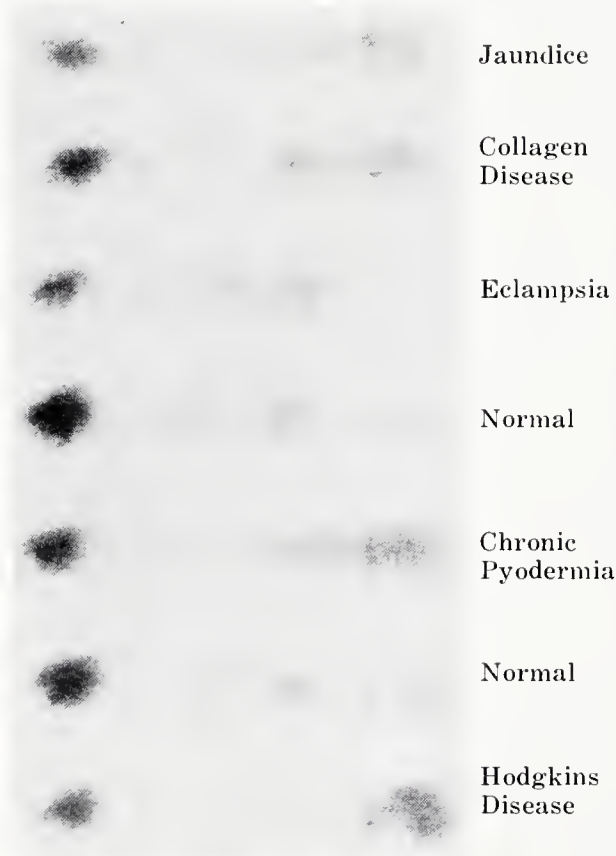


FIGURE V

made up of *F* hemoglobin. In the combination of sickle cell - thalassemia (microdepranocytic disease) the remainder of the hemoglobin consists of *A* and *F* hemoglobin. In the combination of sickle cell - other abnormal hemoglobin disease the minor component consists of one of the other ab-



FIGURE VI

Reproduced from article by Chernoff (1)

concentrate the protein before fractionation can be performed. This procedure is again more time consuming and not ordinarily available from most laboratories.

SUMMARY

In summary, paper electrophoresis provides the clinician with a simple practical method of protein fractionation. It may reveal pathognomonic changes of multiple myeloma, nephrosis, agammaglobulinemia, sickle cell disease, and the other hemoglobinopathies. It is otherwise useful clinically only as a non-specific test.

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ARKANSAS PUBLIC HEALTH AT A GLANCE

Arkansas Public Water Supplies, January 1957*

COMMENTS

What do these four classifications of public water supplies mean? They are explained below:

1. Communities which are authorized to display a highway sign, "Water Supply Approved by State Health Department," make an agreement with the State Health Department to maintain continuously the following high standards:

a. Compliance with the regulations of the State Board of Health pertaining to public water supplies.

b. The responsible personnel having supervision over the water utility are licensed by the Arkansas Water and Sewage Conference.

c. Compliance with the U.S. Public Health Service Drinking Water Standards for bacteriological quality. (Must do this

for at least six months before highway sign is authorized.)

d. Effective enforcement of an acceptable plumbing code.

These signs may be removed at any time if these standards are not met.

2. Communities which do not meet one or more of the above requirements but do comply with the U. S. Public Health Service Drinking Water Standards for bacteriological quality are so indicated on the map. Note that this rating applies only to bacteriological quality, not to mineral quality or physical quality.

3. "Water treated" indicates either bacteriological or mineral treatment or both.

4. "Water untreated" applies to deep well supplies. Generally, chlorination of these supplies has not been justified on the basis of bacteriological sampling, and the chemical quality has been generally satis-

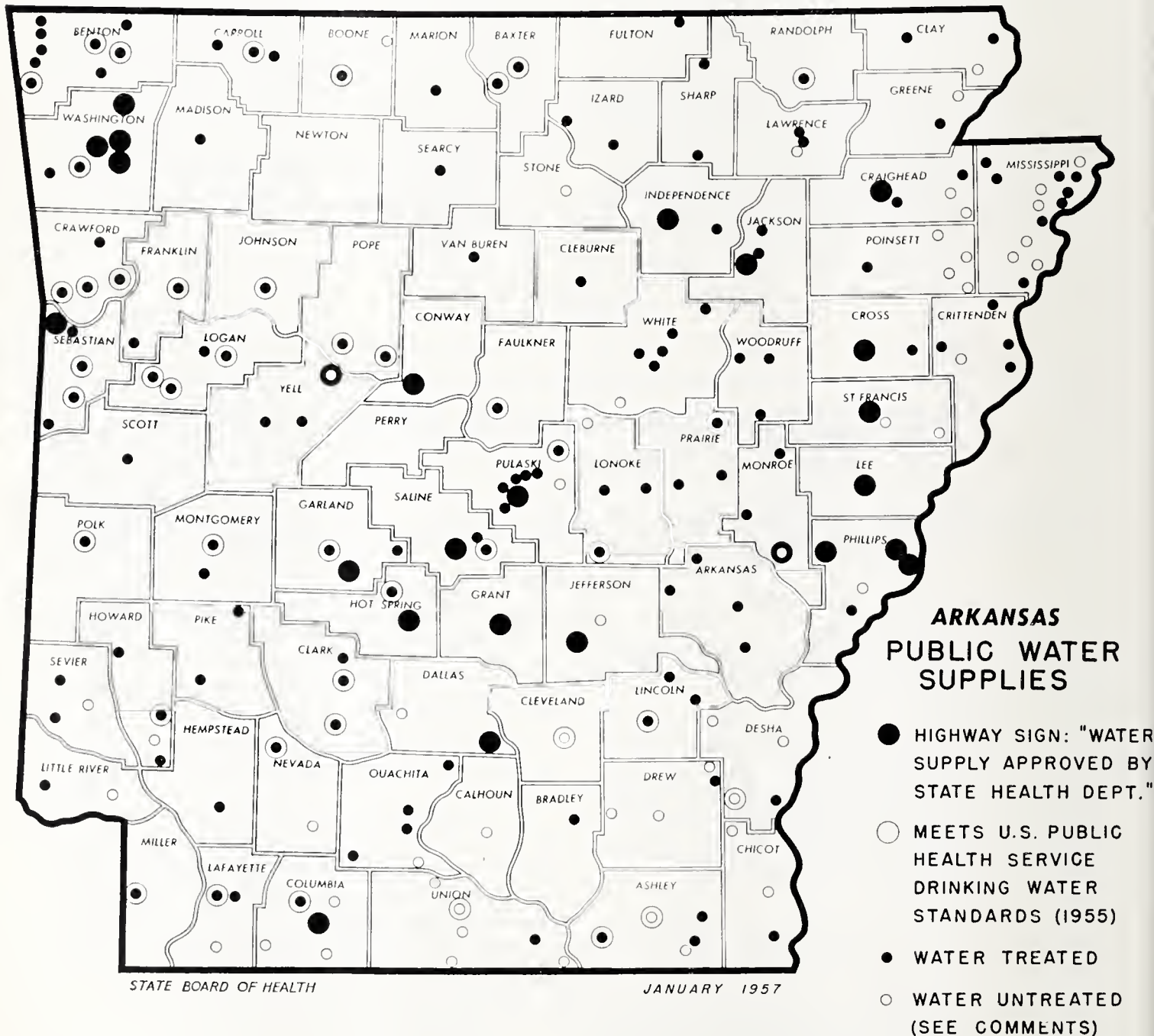
*Sponsored by the Arkansas State Board of Health.

FEATURES

factory and treatment has not been required.

Classifications numbered three and four above are not listed as meeting the U.S.P.H.S. Drinking Water Standards mainly because they have not submitted a

sufficient number of samples to be sure of their continuous safety. These water supplies are not necessarily unsafe. Actually, as of January 1957, there were only two water supplies in Arkansas that were not generally acceptable to the State Health Department.



Editorial

The Seattle AMA Meeting

R. B. ROBINS, M.D.

Dr. James Kolb of Clarksville and I represented the Arkansas Medical Society as delegates to the Clinical Session of the American Medical Association in Seattle, Washington, November 27-30, 1956.

We were strongly impressed with the address of Dr. Dwight H. Murray, President of the AMA, when he strongly condemned governmental intervention in medicine. He expressed the belief that the quality of medical care cannot be as high when both patient and doctor are dependent upon government, because initiative succumbs to dictation and self-reliance is replaced by the crutch of government.

Dr. Kolb and I were reminded that Congressman Oren Harris of Arkansas would be Chairman of the Interstate and Foreign Commerce Committee in the coming Congress. This committee considers all health legislation and it places our own Congressman in a very strong place of leadership. It is well for Arkansas physicians to have this information. Congressman Harris has been invited to address the next meeting of the American Medical Association which will be held in New York city in June.

There was such concern among many Arkansas physicians regarding the proposed ten-section revision of the Principles of Medical Ethics. We are glad to report that

the House of Delegates decided to postpone action on this matter for further consideration and study. Sections 6 and 7 were the controversial sections and it was decided that the following four areas needed more specific attention:

- (1) Division of fees;
- (2) The dispensing of drugs and appliances;
- (3) The corporate practice of medicine;
- (4) Greater emphasis concerning the relationship between physicians and patients.

The House of Delegates considered the matter of Veterans' Medical Care again and recommended that new legislation be enacted limiting such care to veterans with peacetime or wartime service whose disabilities or diseases are service-incurred or aggravated. The House condemned as unlawful the practice of Veterans Administration hospitals which admit patients who are covered by workman's compensation insurance or by private health insurance and which render bills for the cost of their care.

Actions were taken on a wide variety of subjects which will be reported to all physicians in the coming issues of the Journal of the American Medical Association.



MEDICARE

FOUNT RICHARDSON, *M.D.*

A challenge has been flung in the path of every man who will participate in the medical program for Service Dependents, in Arkansas.

In setting up a fee-schedule for the state, and getting it approved by Major-General Paul Robinson who directs the program, it seems the Committee of the Arkansas Medical Society did their job rather well, maybe too well.

General Robinson advises us that the Arkansas fee schedule is some higher than the average, and higher than that of our surrounding states.

We assured General Robinson on November 7, that the Arkansas schedule was set to cover most contingencies and that it was therefore higher than the average fee-for-service, as paid in our state. We also assured him that every Arkansas physician knew he was expected to charge his *usual* fee, not the limit, when he sent his bill to

the Arkansas Medical Society for service rendered.

Arkansas physicians are assured that the Department of Defense does not want "cheap" medicine. They want the best medical care; they want to pay the "going" rate, not a maximum rate. General Robinson is doing his duty in trying to see that public funds (our taxes) are not misspent. He is to be commended and supported.

We feel Arkansas Physicians will not use the fee schedule to gouge the government for the maximum fee. We expect every physician to charge the usual and proper fee and leave the relationship as it now exists, with a margin for the extra services, only if these extra services are performed.

The alternative is the renegotiation of the Arkansas Contract and the setting of a lower fee schedule. This would please no one.

The challenge to the physicians of Arkansas is clear.



Medicine in the News

ACTIONS OF THE HOUSE OF DELEGATES

AMERICAN MEDICAL ASSOCIATION TENTH CLINICAL MEETING

Nov. 27-30, 1956

Seattle, Wash.

This summary is being sent to you as an aid in the preparation of any verbal or written reports which you may wish to make on the proceedings of the House of Delegates at the Seattle meeting. It covers only a few of the many important subjects dealt with by the House and is not intended as a detailed report on all actions taken.

Seattle, Wash., Nov. 30.—Medical ethics, veterans' medical care, radioactive isotopes, continuance of the AMA interim session, hospitalization for patients with alcoholism and a report of the Committee on Medical Practices were among the wide variety of subjects acted upon by the House of Delegates at the American Medical Association's Tenth Clinical Meeting held Nov. 27-30 in Seattle.

Dr. Edward M. Gans of Harlowton, Montana, was announced at the opening session Tuesday as the 1956 General Practitioner of the Year. The annual award, carrying with it a gold medal and a citation, is presented to a family doctor selected by a special committee of the Board of Trustees for outstanding community service. Dr. Gans, who is 80 years old, has practiced medicine

for 51 years and has been in the Harlowton area for the past 44 years.

Strongly condemning government intervention in medicine, Dr. Dwight H. Murray of Napa, Calif., AMA President, told the opening session that "the medical profession, along with business and industry, is caught between those who desire to promote sound government programs and those who desire even more intensely to perpetuate party politics. Unfortunately, in recent years a benevolent federal government appears more attractive to the voting public than the preservation of individual freedoms. Medicine must do its utmost to reverse this trend."

Total registration at the end of the third day of the meeting, with half a day still to go, had reached 5,191, including 2,738 practicing physicians and 2,453 residents, interns, medical students, nurses and guests.

Veterans' Medical Care

The House revised AMA policy on veterans' medical care by endorsing in principle the following paragraph suggested by the Council on Medical Service:

"With respect to the provision of medical care and hospitalization benefits for veterans in Veterans Administration and other federal hospitals that new legislation be enacted limiting such care to veterans with peacetime or wartime service whose disabilities or diseases are service-incurred or aggravated."

In another action concerning veterans, the House passed two resolutions condemning as unlawful the practice of Veterans Administration hospitals which admit patients who are covered by workman's compensation insurance or by private health insurance and which render bills for the cost of their care. Both resolutions requested the AMA to take action to bring about a discontinuance of such practices by VA hospitals, and one of them instructed the Association Secretary to obtain from each state testimony or records of each known case that violates VA Reg. 6047-D1.

Radioactive Isotopes

The House rescinded the June, 1951, action, which limited the hospital use of radium and radioactive isotopes to board-

certified radiologists by approving a new policy statement which says:

"(1) In any hospital in which a patient is to receive radium or the products of radium or artificially produced isotopes, there should be a duly appointed Committee on Radium and Artificially Produced Radioisotopes of the hospital professional staff. This committee should include, but not necessarily be limited to, the following qualified physicians: a radiologist, a surgeon, an internist, a gynecologist, a urologist and a pathologist. This committee should have available such competent consultation of other physicians and scientific personnel as may be required by it. Where this is not practicable, the hospital staff should consult the nearest Committee on Radium and Artificially Produced Radioisotopes.

"(2) In any hospital, the use of radium or its products and artificially produced radioactive isotopes for diagnostic or therapeutic purposes shall be restricted to qualified physicians so judged by the Committee on Radium and Artificially Produced Radioisotopes of the professional staff to be adequately trained and competent in their particular use.

FROM THE FEDERAL MEDICAL SERVICES NEWSLETTER

VA Contract Hospitalization

The enabling legislation which authorizes VA care for veterans with nonservice-connected disabilities specifies that such care shall be provided "... in any Veterans Administration facility, within the limitations existing in such facilities." The AMA has frequently pointed out that the vast expansion of the VA hospital system cannot be justified in terms of an increase in service-connected disabilities; there are now over 70 thousand operating beds more than are needed for such cases.

The latest one-day census of VA patients (November 30, 1954) also shows 3,794 VA patients (including ten patients not classified as VA beneficiaries) in non-VA hospitals; during the fiscal year ending June 30, 1954, the average daily patient load in non-VA hospitals was 5,453. Some of these patients were in hospitals of the armed services, some in PHS hospitals, some in the Ca-

nal Zone, some in state and local hospitals, and some in private hospitals.

According to official interpretation of VA regulations, service-connected patients may be hospitalized at government expense in non-VA hospitals for a number of reasons, including lack of space at a local VA hospital or the convenience of the veteran. If, therefore, all "available" beds are occupied by NSC cases when the SC case applies, he may be sent to a private hospital.

However, of the 3,784 VA beneficiaries in non-VA hospitals on November 30, 1954, only 1602 (less than half) were being treated for service-connected disabilities. The explanation is that the VA "contracts" for the use of a certain number of beds in non-VA hospitals on an annual basis; i.e., it rents beds from the Army, Navy, Air Force, Public Health Service. These beds, having been contracted for, are considered by the VA as "Veterans Administration facilities" and, when empty, are therefore considered "available" for non service-connected cases.

As a result, veterans with nonservice-connected disabilities occupy not only two-thirds of the beds in VA hospitals, but over half the beds which the VA rents from non-VA hospitals—all "within the limitations existing in such (VA) facilities."

American Public Health Association 1790 Broadway, New York, N. Y.

An eleven-year-old ceremony held in connection with the annual meeting Nov. 12-16, 1956, is the presentation of the Association's Lasker Awards in public health. They are given either to individual's or groups for outstanding achievements in research or in the administrative application of research in the control of diseases that are recognized as major causes of death.

The 1956 winners were:

Alan Gregg, M.D., former vice-president, Rockefeller Foundation.

Jonas E. Salk, M.D., Pittsburgh, V. Everett Kinsey, Ph.D., Kresge Eye Institute, Detroit, and Arnall Patz, M.D., Baltimore, a joint award.

Karl Meyer, M.D., College of Physicians and Surgeons, Columbia University, and Francis O. Schmitt, D.Sc., Massachusetts

Institute of Technology, Boston, a joint award.

William P. Shepard, M.D., second vice-president, Metropolitan Life Insurance Company.

Health Insurance Institute

A plan to offer health insurance to people who have physical impairments was revealed at the recent Individual Insurance Forum of the Health Insurance Association of America in Dallas, Texas. The Subcommittee on Substandard Risks of the HIAA Individual Insurance Committee offered such a plan while making its report to the more than 300 representatives of insurance companies meeting in November to discuss developments in underwriting health insurance policies.

The Month in Washington

Washington, D. C.—A new venture in federal medical care—the armed forces dependents medical care program—was launched on schedule December 7, and 2 million dependents of servicemen became eligible for hospitalization and extensive medical care.

The "medicare" program, because it is a pioneer effort, will be watched closely by members of Congress, the armed services and the medical profession. Congress will be interested in keeping track of the cost of the program as well as the availability of care.

The Defense Department has earmarked \$41 million for the program through next July 1. Thereafter it is estimated the cost will run between \$60 million and \$70 million a year. When the program is operating at its peak, as many as 800,000 dependents not now getting care at U. S. expense are expected to be participating.

AMA Gives \$5,000 to Hungarian Physicians

On the final day of the Seattle session, the Board of Trustees announced that the AMA was contributing \$5,000 to Hungarian physician refugees in Austria.

10th AMA Clinical Meeting

Registrations at the Tenth AMA Clinical meeting in Seattle, Nov. 27-30, exceeded

all conservative expectations. The total registration was 6,282. This included 2,813 physicians. The highest physician registration was from Seattle, of course, with 878. Washington state followed with 805; registration from Oregon was 190 and from California, 154.

Last year's AMA Clinical meeting in Boston drew a total of 8,637, including 3,779 physicians. At Miami in 1954, the total was 7,707, including 3,253 physicians.

Air Force Starting Work On Aero Medical Center

The Air Force expects to award the first contract in December for construction of a new Aero Medical Center, an \$8.8 million project scheduled for completion at the end of 1958. The new facility will be located at Brooks Air Force Base, San Antonio, Tex.

New Hospital Unit Started

Construction has been started on a two-story apartment housing unit at Crittenden Memorial Hospital in West Memphis. The new structure, which will consist of nine units, will be situated on the hospital ground and will be used for housing hospital personnel. The building will cost \$60,000.

New Wing of Springdale Memorial Hospital Completed

The new wing of the Springdale Memorial Hospital, representing an expenditure of more than \$250,000, was opened for public inspection Sunday afternoon, November 18. The new wing, located to the north of the original building, will increase the capacity of the hospital to 60 beds. Also included in the expansion program is a large new storage area and enlargement of the X-ray department. Connecting the north part of the building with the new wing is a unique "solarium" that provides for a lounging area, waiting room, and by use of partitions may be used for small gatherings and meetings.

Doctor of the Year

Dr. Edward M. Gans of Montana was the AMA choice of "Doctor of the Year". Our own Dr. J. H. McCurry was one of the leading candidates for this honor. He has written the following:

"I feel sure the AMA Board of Trustees made a just and wise selection by naming Dr. Edward M. Gans of Harlowtown, Montana, as their choice for this distinguished honor. I congratulate Dr. Gans on having deserved and won this great honor. I do feel greatly appreciative, elated and honored by the action my county's society, friends over the state, and the councilors of the Arkansas Medical Society took in selecting me for this signal honor. It is good to know at the end of the day, when shadows tint the western sky that one's efforts have not gone completely unnoticed. My kindest regards and best wishes to all concerned."

Most Sincerely,
J. H. McCurry

4 Arkansans Get Medical Degrees

John Paul Phillips, Dumas; Milton Seaborn Harbuck, Malvern; Edwin Leon Lindsey, Morrilton, and Bill Branham Lefler, Clinton, are among the 111 students of the University of Tennessee Medical Units who graduated in December.

Special Audit of Medical Center Set

A special audit of the University of Arkansas Medical Center was presented to a joint meeting of the Arkansas Legislative Council and the Legislative Audit Committee in Little Rock, Thursday, Dec. 13. The Legislative Council, out-of-session arm of the Arkansas General Assembly, recently held up action on the Medical Center's proposed budget, pending an inspection of the audit. The Medical Center is asking for about five million dollars a year.

The American College of Surgeons Meeting

The Arkansas chapter of the American College of Surgeons held a panel discussion Sunday, Dec. 9, at the University of Arkansas School of Medicine on various surgical topics.

Physician-Death Census Reported

Chicago. — A study of all physician deaths between 1949-51 showed today that there were six per cent fewer deaths among them than would have been expected among other white adult males.

The study, made by the American Medical Association's Bureau of Medical Economic Research, was reported by Bureau director Frank G. Dickinson, Ph.D., in the current (Dec. 15) Journal of the AMA.

Dr. Dickinson said there were 204,450 physicians on record in a 1950 census of the doctor population. In 1949-51, there were 10,738 physician deaths. This was only 93.3 per cent of the number expected, based on figures for the white male population in general.

In fact, life expectancy for physicians was better at almost every age level than it was for other men. For instance, at age 25 the physician could expect to live nine-tenths of a year longer than other 25-year-old men.

However, heart disease and diabetes hit physicians harder than other men. Diabetes took 35 per cent more deaths than would have been expected, while heart disease took two per cent more. This was especially important after the age of 60, and probably explains why the age groups 60-69 were the only groups which had higher death rates than the rest of the male non-physician population, the report said.

24 Physicians Get Sears-Roebuck Loans

Assistance in the form of long-term, unsecured loans to 24 physicians for the establishment and improvement of 15 medical practice units has been announced by the Sears-Roebuck Foundation.

These loans, ranging from \$1,000 to \$10,000, were made under the Plan of Financial Assistance of the Foundation and are part of an annual grant to a revolving assistance fund. The loans totaled \$88,500.

Theodore V. Houser, president of the Foundation, also announced that applications are now being received for consideration during the first half of 1957 when approximately \$72,500 will be available for additional loans. Applications received prior to April 1 will be processed no later than June 15. Physicians desiring to apply should have their plans well developed so that proper evaluation may be made. Applications may be obtained from state, county or city medical societies.

The purpose of this plan is to help physicians supplement personal and local financing which is inadequate to cover the entire

cost of building, remodeling, equipping, or establishing a medical practice. The Foundation hopes to be of aid in improving medical distribution and medical facilities in areas where there is a shortage of physicians and inadequate facilities exist.

First Four Small Business Loans To Medical Groups Announced

The first four loans have been made under the Small Business Administration's program of 10-year loans to proprietary hospitals, nursing homes and clinics to help them in new building or expansion plans. The federal agency will lend up to \$250,000 a facility, usually at 6 per cent interest, where a group proves it cannot get local financing.

AMA Washington Letter

The President met with leaders of both parties in mid-December to discuss his plans for next year, which will be embodied in the annual State of the Union message. One of the proposals now being worked on is federal workers health insurance.

Defense Gives More Details on Medicare Procedures and Policy

Identification—Military dependents may submit as identification their post exchange card, the combined post exchange-commissary-military medical care card, or the standard military dependent identification card. After next July 1 the only identification honored will be a special Defense Department medicare card.

Payment for drugs—ODMC says there are no plans for authorizing payment for drugs, medicinals or other medical supplies, except those furnished while hospitalized or those administered directly by a physician.

Claim forms—The Government Printing Office is turning out large quantities of the claim form titled "Statement of Services Provided by Civilian Medical Sources", and they are being sent to the states as rapidly as possible.

Record cards—While the government won't supply record cards, an IBM form will be standardized for use within the Army.

The electroplate number, in turn, will be available shortly to state societies from local IBM representatives. ODMC says it is desirable that this form be used throughout the program.

AMA Hears of Doctors' Plight in Hungary

"Every hour reports are being received in Vienna, telling us of the constantly increasing number of doctors who are escaping across the border and applying for refugee status in Austria. The reason for this panic-stricken flight is that the A. V. O. (Hungarian Gestapo or Secret Police) are arresting all doctors in Hungary who have treated injured Revolutionaries and who did not report the details, as required by law."

AMA Approval Announced For Army's General Practice Residency

Approval of the two-year Residency Program in General Practice at the U. S. Army Hospital, Fort Knox, Ky., has been given by the Council on Medical Education, American Medical Association according to information received by the Education and Training Division, Office of The Surgeon General of the Army.

Laboratory Research Grants Of \$24.4 Million Made by PHS

Public Health Service announces awarding of 73 grants totaling \$24,460,467 to help institutions in 24 states and the District of Columbia to build health research facilities. Congress voted \$30 million for this new program during the current fiscal year. PHS indicated the remaining matching funds as yet uncommitted would be used up before next July 1. For instance, the National Advisory Council on Health Research Facilities, which screened and recommended the 73 grants, deferred action on 50 other applications; the council meets again in March.

PHS Surgeon General Leroy Burney stressed the council proposed grants only for construction and not for movable equipment because of the apparent need shown by more than \$66 million in completed applications filed and another \$49 million in letters of intent. He added: "The council also felt that in the program's ensuing years, assistance toward essential equip-

ment for the research buildings can be provided."

Folsom Predicts Another \$2 Billion Health-Welfare Budget

Secretary Folsom says the Department of Health, Education, and Welfare is planning to ask for more than \$2.2 billion for HEW programs this coming fiscal year. The last Congress voted that amount. With a final decision still pending in the Budget Bureau, Mr. Folsom is not announcing the exact total to be requested in the budget message due to be sent to Congress in January. The Secretary warns that while the country must maintain a strong defense "we want to be very careful that we don't let down on expenditures in the field of health, education, and welfare . . . We have to look out for our human resources."

He outlines these legislative goals for the next session: (1) grants to medical schools to build classrooms, (probably at the rate of \$20 million a year) ; schools and other institutions now have available \$30 million a year for laboratory construction, (2) authority for small insurance companies to pool their resources without violating anti-trust laws in order to encourage expansion of voluntary health insurance, and (3) more programs for the aged.

Award of 92 Life Science Research Contracts Announced by AEC

Award of ninety-two unclassified life science research contracts in the fields of medicine, biology and biophysics and radiation instrumentation was announced today by the U. S. Atomic Energy Commission. The contracts were awarded to universities and private institutions as part of the AEC's continuing policy of assisting and fostering research and development in fields related to atomic energy as specified in the Atomic Energy Act of 1954, and as amended in 1956.

Two contracts were awarded to the University of Arkansas:

The Utilization of Radioisotopes by Vertebrate Embryos, P. M. Johnston, \$5,617.

Studies on the Phosphorylation Cycle in the Intact Animal Using Radioactive Phosphorus, Jacob Sacks, \$8,000.

Rusk Committee Urges Integration Of Hungarian Physicians

The Health Resources Advisory Committee of the Office of Defense Mobilization, under chairmanship of Dr. Howard Rusk, is asking all health and educational institutions and organizations to "make every effort" to assist in the re-establishment in this country of Hungarian physicians, dentists, medical and dental students and other health personnel now coming in as refugees. This committee advises the director of ODM on problems relating to supply of health personnel. The committee approved the following resolution:

"The health professions like all other Americans have been deeply shocked by recent events in Hungary. The professional integration of these new Americans who are physicians, dentists, medical and dental students and other health personnel into American health agencies, both private and public, medical and dental schools, and other health educational programs, will pose many difficult problems. The Health Resources Advisory Committee, however, earnestly urges every American health organization and educational institution to make every effort to lend its aid and resources toward the re-establishment of our new professional colleagues in situations commensurate with their professional status. With our national shortage of health personnel of all types, these new Americans can make a distinct contribution to our health resources. To the dignity of political and personal freedom let us help give them the dignity of professional status."

Strong Sentiment for Jenkins-Keogh Plan in Next Congress

The newly-elected House members of the 85th Congress, all 435 of them, have been polled on the principles of the Jenkins-Keogh bills for tax deferment on money paid into annuity plans. The American Bar Association's Committee on Retirement Benefits reports that more than half of the members favor such legislation—a total of 294. Only three are opposed, 18 are non-committal and 120 did not reply to the question.

Medical-Legal Professions Joint Problems

The film "The Medical Witness" had its premiere showing in Seattle on November 27 before an audience of 650 physicians and attorneys.

All speakers pointed out that this film was the first in a series of six intended to acquaint physicians with their essentiality in litigation and to dispel their fears of testifying in court. The film is also intended to aid attorneys in their working relationships with physicians and to impress upon them the necessity for adequate pre-trial preparation and the use of proper demonstrative evidence.

Announcements

American College of Radiology Meeting

The regular Annual Meeting of the Members and Fellows of the American College of Radiology is to be held Friday, February 8, 1957, at 9 a. m., at the Drake Hotel in Chicago, Ill.

Postgraduate Program on Psychiatric Problems

The University of Tennessee College of Medicine announces a postgraduate program, Psychiatric Problems in General Practice, at the Medical-Surgical Building, Memphis, Tenn., January 16, 17 & 18, 1957.

University of Texas Course in Rheumatic Diseases

The University of Texas Postgraduate School of Medicine will present a course in Rheumatic Diseases: Present-Day Concepts and Their Management, at Houston, Texas, February 27 through March 1, 1957. Drs. Joseph Bunim, Richard Freyberg and William P. Holbrook will be guest lecturers and will be assisted by faculty members of the Postgraduate School.

The tuition fee for the course is \$40.00, and application for admission should be mailed to The University of Texas Postgraduate School of Medicine, Texas Medical Center, Houston 25, Texas, before February 18, 1957.

Symposium to Discuss "Fats in Human Nutrition"

Chicago. — "Fats in Human Nutrition" will be discussed in a symposium to be held March 15 in the Louisiana State University auditorium, New Orleans, under the sponsorship of the American Medical Association's Council on Foods and Nutrition.

HARVEY

TERCENTENARY CONGRESS 1957

June 3rd — June 7th

At The Royal College of Surgeons, London

Four Day Meeting for Surgeons, Nurses in New Orleans, February 4-7, 1957

More than 2,000 surgeons, surgical specialists, nurses and related medical personnel from Canada and the United States are expected to attend a comprehensive four-day Sectional meeting of the American College of Surgeons in New Orleans, Louisiana, February 4 through 7, at Hotels Roosevelt and Jung.

Alumni Postgraduate Convention

Los Angeles. — Sixteen pertinent refresher courses and 12 outstanding medical speakers will be featured at the 1957 Alumni Postgraduate Convention sponsored by the Alumni Association of the College of Medical Evangelists School of Medicine in Los Angeles.

Cancer Research Symposium

The Eleventh Annual M. D. Anderson Hospital and Tumor Institute Symposium on Fundamental Cancer Research will be held March 7, 8, and 9, 1957, at The University of Texas M. D. Anderson Hospital and Tumor Institute in the Texas Medical Center, Houston. The general topic for the Symposium is "Viruses and Tumor Growth."

National Tuberculosis Association

The 52nd Annual Meeting of the American Trudeau Society, medical section of the National Tuberculosis Association, will be held in Kansas City, Missouri, May 6 to 9, 1957, in conjunction with the Annual Meeting of the National Tuberculosis Association.

U. S. Department of Health, Education, and Welfare

The 26th Venereal Disease Postgraduate Conference for physicians sponsored by the University of Tennessee College of Medicine and the Public Health Service will be held at the College of Medicine in Memphis, April 18-20, 1957, inclusive.

Postgraduate Conference

The Temple Division of the University of Texas Postgraduate School of Medicine offers the fifth Scott, Sherwood and Brindley Foundation Postgraduate Conference in Medicine and Surgery on March 4, 5, 6, 1957. For detailed information write: Directors, Scott, Sherwood and Brindley Foundation, Scott and White Clinic, Temple, Texas.

The First Postgraduate American Assembly in Fertility and Sterility

The New York Medical College-Metropolitan Medical Center announces the First American Postgraduate Assembly in Fertility and Sterility, to be held in New York City at the College and affiliated hospitals from May 18-31, 1957.

Emphasis in the course will be placed on the clinical aspects of human infertility including recent advances in diagnosis and therapy.

100th Birthday Party

The Academy of Medicine of Cincinnati cordially invites all physicians, their families, and their patients to its 100th Birthday Party, February 27 through March 5, 1957. One hundred seventy-five health and scientific exhibits, representing medicine, hospitals, research centers, public health, nursing, pharmacy and industry will be displayed.

Cardio-Vascular Seminar

The fourth annual Cardiovascular Seminar, sponsored by the Mississippi Heart Association, will be held at the University Medical Center in Jackson on April 1-5, 1957.

Co-sponsored by the University of Mississippi School of Medicine and accredited by the American Academy of General Practice for 30 hours, Category I, the seminar will offer a seven-man visiting faculty.

Clippings From Here and There

Excerpts from Speech

"FREEDOM IN MEDICAL PRACTICE"

Given by

Dwight H. Murray, M.D.

President, American Medical Association

on November 27, 1956

Today there is a greater need for a united, forceful and informed profession than ever before. We have been caught in the throes of a social revolution which demanded something for nothing. Changes have been taking place all around us, and medicine has not escaped unscathed.

For example, in a few days Public Law 569, the bill providing medical care for military dependents, becomes effective throughout the land. Contracts already have been signed with the government by the majority of our state societies. No longer can any doctor claim that this law does not affect him. No longer can he say that government laws really are not changing the practice of medicine.

Today the medical profession along with business and industry is caught between those who desire to promote sound government and those who desire even more intensely to perpetuate party power. Unfortunately, in recent years a benevolent federal government appears more attractive to the voting public than the preservation of individual freedom. Medicine must do its utmost to reverse this trend.

We do not deny that there is an area of legitimate concern by the government for the health and welfare of the people. But each year government seems to extend that area. We get some idea of this expansion from the new federal medical budget.

This year, according to our Washington Office, the average family will be paying \$54.61 for the U. S. Government's health and medical activities. And the total expenditures this year amount to 2½ billion dollars—290 millions more than last year. Even in an over-all federal budget of 61 billion dollars, the total health cost of 2½

billions is not insignificant. It is a billion dollars more than the cost of running the Commerce Department, half a billion more than the Agriculture Department and six times more than the Interior Department's budget.

Obituary

Dr. Luther M. Lile died in his home at Hope Monday, November 19, at the age of 62. Dr. Lile had practiced in Hope for 38 years. He was born at Waldo, attended school in Jonesboro and graduated from the Jonesboro High School. He attended Ouachita College, Arkadelphia, and graduated from the University of Tennessee School of Medicine in 1916. He was a member of the American College of Surgeons, a Mason, Rotarian, Presbyterian, and a member of the Hempstead Memorial County Hospital staff. At one time he held a ceremony in his office during which he burned more than \$50,000 worth of bills. Dr. Lile opened the first county hospital in Hope. In addition to his widow, survivors include a son, Henry Lile, Hope; two daughters, Miss Alice Lile, Texarkana, and Mrs. Mary Ann Singleton, Houston, Texas; a brother, Dr. H. J. Lile, Jonesboro; and four sisters, Mrs. Walter Bilyeau, Jonesboro; Mrs. H. J. Cherry, Bay; Mrs. Alden Baker, Harrisburg, and Mrs. Paul A. Lewis, Hope.

Dr. Shelly C. Grant, 72, died at his home near Van Buren Friday, November 16. Dr. Grant retired from the practice of medicine four years ago after forty years of service. Survivors include a daughter, Mrs. Sue Burnett, Salem, Ore.; a brother, W. B. Grant, Oklahoma City; and a sister, Mrs. A. E. Barksdale of Jackson, Tennessee.

Dr. Robert Caldwell, aged 80, died Monday, December 3, at a Little Rock hospital of injuries suffered when he was thrown out of his automobile in an accident Saturday, December 1. Dr. Caldwell was born in Morgan County, Indiana, October 28, 1876, the son of Robert and Sarah Gillaspay Caldwell. He attended high school at Acton, Ind., and Central Normal College of Danville, Ind. Dr. Caldwell also attended

Illinois Medical College and the Medical College of Louisville, Ky. Dr. Caldwell, who had been practicing in Little Rock since 1909, was the first doctor in Arkansas to do bronchoscopic work. He spent three months of 1913 in Vienna, London and Berlin studying this specialty. He had served as chief of staff of St. Vincent Infirmary and had been a member of the teaching staff at the University of Arkansas Medical School. He was president of the Federal Bank and Trust Company during the depression years. Dr. Caldwell was a member of the State Hospital Board from 1922-26 and served as its president from 1932-36. He was a member of the group that helped establish the Benton unit of the State Hospital. He had also served as president of the Arkansas Medical Society in 1922-23. Dr. Caldwell was a member of the First Methodist Church, Little Rock Consistory 1, Scimitar Shrine, Pulaski County Medical Society, Arkansas Medical Society, American Medical Association and the American Academy of Ophthalmology and Otolaryngology. He is a fellow of the American College of Surgeons. Survivors include his wife, Mrs. Monta Almerath Caldwell; two brothers, Dan and Wade Caldwell, both of Indianapolis, Ind.; and two sisters, Mrs. Nellie Berry of Indianapolis and Mrs. Grace Berry of Wanamaker, Ind.

Dr. James Cranford Gilliam, 91, died at Searcy Tuesday, December 11. Dr. Gilliam had practiced medicine at Des Arc continuously since June 10, 1906. He was born in Hopkins County, Texas, and moved with his family to Charleston, Ark., when only three years of age. Dr. Gilliam was a graduate of the Louisville, Ky., Medical College and did postgraduate work in Tulane University, New Orleans. He was a Baptist. Dr. Gilliam, who was still active as a practicing physician, formerly operated his own hospital in Des Arc. He was a member of the Arkansas Medical Association and American Medical Association. He was the oldest recipient of the Arkansas association's 50-year pin still actively practicing. Survivors include a son, Grover C. Gilliam, Des Arc; two daughters, Mrs. Lee-man Mason, Des Arc, and Mrs. Lillian M. Wilson, St. Petersburg, Fla.; two brothers, Charlie N. Gilliam, Erick, Okla., and Gib Gilliam, Booneville; and two sisters, Mrs.

John Lloyd, Amhurst, Ohio, and Mrs. Bud Brown, Siloam Springs.

PERSONALS AND NEWS ITEMS

Dr. W. H. Handley, Jr., of El Dorado closed his office December 15 prior to entering the air force. Major Handley will be stationed at Brookley Air Force Base at Mobile, Alabama. He will be classified as a general surgeon.

In attendance at the AMA Clinical meeting in Seattle, Washington, November 26-30 were **Dr. James M. Kolb** of Clarksville, **Dr. R. B. Robins** of Camden, **Dr. Fount Richardson** of Fayetteville, **Dr. J. H. McCurry** of Cash, **Dr. Charles R. Henry** of Little Rock, and the executive secretary, Mr. Schaefer.

The Ouachita Hospital in Hot Springs has appointed **Dr. G. T. Stewart** of Mount Ida to their active staff. Dr. Stewart will not be leaving Mount Ida, however; he will continue to practice at the local clinic.

In recognition for unselfish devotion to the welfare of Fort Smith, **Dr. Ralph Ewing Crigler** was presented the 1956 Golden Deeds award. The honor was presented at a banquet attended by 300 Exchange Club members, their wives and former recipients of the award. He was cited for his work in the Boys' Club, services to the Kiwanis boys' camp and services to the Joseph M. Hill school, where he serves on its board. He was commended also for his work in helping to install and operate the Red Cross blood program in Fort Smith and his work as president of the board of the Arkansas Tuberculosis sanatorium.

Dr. Lamar McMillin, Little Rock, took a short Christmas vacation and visited his home town, Vicksburg, Miss. While there he participated in their Christmas musical program.

Dr. Louis A. Cohen of Little Rock has been appointed chief of the Neuropsychiatric Service of the Little Rock Veterans Administration Hospital. He has practiced

for 11 years at the Gilbert Clinic of Little Rock, which he founded, and also as a consultant at the VA Hospital. Dr. Cohen is a past president of the Arkansas Psychiatric Association.

The guest speaker at the December 10 meeting of the El Dorado Rotary Club was **Dr. Eldon Tommey** of that city. Dr. Tommey spoke on "Surgery."

Dr. O. C. Melson of Little Rock was named chief of staff of St. Vincent Infirmary at the annual staff meeting December 11. He succeeds **Dr. John E. Greutter**. **Dr. C. R. Henry** assumes the office of vice chief of staff and **Dr. Dale Alford** is the new secretary. Divisional chiefs named at the meeting include **Dr. A. A. Pingos**, medicine; **Dr. Richard Logue**, secretary; **Dr. Deane D. Wallace**, obstetrics and gynecology; and **Dr. Nicolas Riegler, Sr.**, general practice.

Dr. W. T. Holman, Jr., formerly of Van Buren, was recently named as staff member of the Benton unit of the State Hospital.

More than 300 people from a 40-mile radius gathered in Swan Lake Church, Sunday, December 2, to honor **Dr. John P. Ferguson**, longtime Jefferson County physician. Dr. Ferguson was presented with a plaque and a check for \$1,000 contributed by his friends on the anniversary of his 48th year of service. At one time in his long career, Dr. Ferguson had retired from medical practice to farm but resumed his practice because there was no other doctor available.

Dr. Chris N. Christu, West Memphis pediatrician, has moved to Fargo, N. D., where he will join the medical staff of the Fargo Clinic.

a "get acquainted" dinner Thursday evening, January 3rd. Present were: Dr. W. H. Lane, Jr., Dover; Dr. G. R. Siegel, Clarksville; Dr. W. C. Hensley, Charleston; Dr. L. A. Whittaker, Fort Smith; Mr. Jack Yates, Representative, Franklin County, Ozark; Dr. Jack Thicksten, Alma; Dr. O. J. Kirksey, Mulberry; Dr. M. C. Edds, Mulberry; Dr. C. C. Long, Ozark; Dr. Jack Gibbons, Alma; Mr. Paul Schaefer, Executive Secretary, Fort Smith; Dr. J. M. Kolb, Clarksville; Dr. W. E. King, Jr., Russellville; Mr. R. H. Williams, State Senator, Russellville; Dr. M. F. Heidgen, Russellville; Dr. Duane Brothers, Ozark; Mr. Abe King, Representative, Johnson County, Clarksville; Dr. G. L. Hardgraves, Clarksville; Mr. Harold L. Ford, Franklin County Judge, Ozark; Mr. Garner Taylor, Johnson County Judge, Clarksville; Dr. R. H. Manley, Clarksville; Dr. W. R. Brooksher, Fort Smith; and Dr. Donald Loveless, Booneville.

The meeting was opened with a welcome and introductions by J. M. Kolb. The new proposed Medical Practices Act was then reviewed by Mr. Schaefer. The remainder of the evening was occupied with discussion of the Medical Practices Act, the proposed budget for the Medical Center, and the revenue problems of the State.

Similar meetings are held in that senatorial district at the beginning of each session of the Legislature with a view to becoming better acquainted with members of the Assembly and in the hope of explaining the position of the Medical Society on legislative matters.

The Jefferson County Medical Society has elected Dr. R. E. Glasscock as president. Other officers elected by the society were Dr. R. D. Dickens, vice president, and Dr. J. R. Pierce, secretary-treasurer. Delegates to the state medical convention will be Dr. C. W. Reid and Dr. Calvin Simmons. Alternates named were Dr. Howard Stern and Dr. H. J. Morris.

Dr. Jerome Levy was installed as president of the Pulaski County Medical Society at a meeting December 4 in the University Medical Center. Officers elected to take office January 1 are Dr. Hoyt Choate, president-elect; Dr. H. Ray Fulmer, vice president; Dr. Francis Buchanan, record-

PROCEEDINGS OF SOCIETIES

Members of the Medical Societies of Johnson, Franklin, Pope, Logan, Crawford, and Sebastian Counties met at the invitation of Dr. J. M. Kolb with State Senators and Representatives and County Judges at

ing secretary, and Dr. Robert A. Calcote, recording treasurer.

At the December meeting of the Garland County Medical Society, Dr. Bernard Rogoff, New York, N. Y., rheumatologist and instructor of medicine at Cornell University, cautioned members about the use of new drugs in the treatment of arthritis and kindred diseases. Dr. Rogoff came to Hot Springs to look over facilities at the Leo N. Levi Memorial Hospital, arthritic research center, and to confer with Dr. E. K. Clardy, medical director, on the institution's arthritic program.

Dr. James W. Leatherman was elected president of the Garland County Medical Society at the society's regular meeting Tuesday, December 11. A Hot Springs Negro physician has been elected to office for the first time in the history of that organization. He is Dr. Torrence J. Collier, who was named vice president. Dr. Robert F. McCrary was named secretary-treasurer.

The Columbia County Medical Society elected Dr. H. Blake Crow president at their December meeting held at the Magnolia Inn in Magnolia. Other officers elected were Dr. Joe Rushton, vice president; and Dr. C. L. Weber, secretary-treasurer. Dr. G. Floyd McLeod, Dr. H. E. Ruff of Magnolia and Dr. A. J. Souter of Waldo were made honorary members of the medical society.

The annual Christmas party for the Independence County Medical Society and Auxiliary was held Tuesday evening, Dec. 11 at the Country Club in Batesville. Guests included Dr. and Mrs. L. Gardner of Russellville and Mrs. Jack Kennedy of Arkadelphia. Both Mrs. Gardner and Mrs. Kennedy spoke following the dinner. A Christmas party with an exchange of gifts and singing of Christmas carols brought the evening to a close.

Dr. O. H. Clopton of Rector was elected president of the Greene-Clay Medical Society at a meeting at Kingshighway Club in Paragould, Tuesday night, Dec. 11. Other new officers are Dr. Clark M. Baker, president-elect; and Dr. H. J. Haley, secretary-treasurer. Dr. A. M. Maddox was named

to a three-year term on the Censor Committee. Dr. Gordon Duckworth of Piggott was named delegate to the State Medical Convention and Dr. Robert W. Ratton was named alternate delegate.

The Sevier-Polk County Medical Society and its auxiliary had their Christmas dinner at Hills Cafe in DeQueen, Friday, Dec. 14. Doctors and their wives from Horatio, DeQueen and Mena attended. Mrs. Charles Jones of DeQueen, president of the auxiliary, presided. Rather than an exchange of gifts, the group donated money to the American Medical Education Foundation.

Dr. Stanley Applegate will head the Washington County Medical Society as president another year. He was re-elected at a meeting of the society Tuesday, Dec. 4, in Fayetteville. Other officers will be Dr. Loyce Hathcock, vice president and Dr. W. J. Butt, secretary-treasurer. They, too, were re-elected to serve another term. Dr. Applegate and Dr. Hathcock were named delegates to represent the county group at the State Medical Convention.

A proposed new medical act was the principle topic of discussion as the Independence County Medical Society met at the Marvil Hotel in Batesville for their November meeting. Attorney Eugene Warren of Little Rock was featured speaker on the medical act while Dr. Joe Shuffield also of Little Rock discussed the medical center budget. Others from out of town in attendance were Rep. Herbert Moody of White County; second councillor of the Arkansas Medical Society at Searcy, Dr. Hugh Edwards; Dr. Paul Wright of Melbourne; the Izard County representative, J. A. Rodman; Drs. J. Ashley Stanfield and T. E. Williams of Newport; and Dr. Meryl Grasse of Calico Rock.

Society Approves Strict Medical Practices Act

A modern medical practices act defining "practice of medicine" to include 20th Century developments in the "healing art" and which would limit, in Arkansas, licensing to doctors who are graduates of a "recognized United States or Canadian" medical school was approved yesterday by the

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House of Delegates of the Arkansas Medical Society, at a meeting in Little Rock.

Also defined is "unprofessional conduct" which in the measure, would present 15 grounds for revocation, suspension or failure to issue a medical license to any individual.

The "teeth" of the bill are found in two sections which declare illegal practice of medicine a misdemeanor and a public nuisance. As a misdemeanor, a convicted violator would draw a possible fine of \$250 to \$500 and/or a county jail sentence of one to eleven months, with each day of illegal practice constituting a separate offense.

The House of Delegates also voted to have the bill presented in the 1957 Assembly by newly elected Van Buren County Rep. Dr. H. J. Hall, Clinton. The measure will be known as the Hall Bill.

The Craighead-Poinsett Medical Society held their annual barbecue at the Elks Hall in Jonesboro, Wednesday, December 5th. There were about 100 attending, who had their choice of barbecue beef, pork, turkey and coon. Attorney Eugene Warren of Little Rock spoke on legislative matters. The following officers were elected: President, Dr. J. W. Webb, Jonesboro; Vice President, Dr. John T. Gray, Jonesboro; Secretary, Dr. J. H. McCurry, Cash; Dr. Vestel V. Smith of Marked Tree was elected Censor for 3 years. This society meets the first Wednesday evening in each month.

The Ouachita County Medical Society met in dinner session as the guests of Dr. T. E. Rhine of Thornton, at the Orlando Hotel in Camden Thursday night, December 6.

The program consisted of an illustrated talk on "Brain Surgery" by Dr. Robert Watson of Little Rock and a talk on "Medical Legislation" by Dr. Joe Shuffield of Little Rock.

Plans were made to hold a one-day post-graduate seminar in February in Camden on obstetrics and gynecology to be given by the staff of Baylor University School of Medicine.

New officers were elected as follows:

President, Dr. L. E. Drewery of Camden.

Vice President, Dr. N. G. Partee of Camden.

Secretary, Dr. R. B. Robins (his 28th year).

Delegate, Dr. C. E. Gossett of Camden.

Alternate, Dr. J. P. Thompson of Bear-den.

Mr. Austin White, Councilor for the Harrison District of the Vocational Rehabilitation Service, addressed the medical and dental staffs of the Boone County General Hospital, and the Boone County Medical Auxiliary, on Tuesday, December 4, 1956.

The district is composed of eight North Central Arkansas counties. Mr. White illustrated his lecture with a color film and said:

"The Vocational Rehabilitation Service, a division of the State Department of Education, is a state-federal program set up to assist disabled persons to return to gainful employment. In order for the rehabilitation program to be efficient it is necessary to secure the cooperation of all agencies and individuals who are concerned with disabled persons. This is particularly true of the members of the medical profession. Doctors are probably the most valuable members of each community so far as vocational rehabilitation of the disabled is concerned. One of the easiest and one of the most important services the doctors can provide the disabled is to refer them to the proper rehabilitation agency. This applies not only to doctors, but to all persons interested in rehabilitation of the disabled.

The rehabilitation of the handicapped is a good investment. It reduces the number from the Welfare rolls. For each dollar appropriated by the State the National Government adds two and one-third dollars. It is estimated that 1,500,000 persons in the United States are in need of rehabilitation. Last year in Arkansas 6,300 persons were aided by the Vocational Rehabilitation Agency. The morale of the disabled is greatly benefited by this program and the handicapped need not remain helpless, but are transformed into happy creative workers."

The newly elected officers of the Boone County Medical Society are as follows: Dr. William P. Barron, President; Dr. G. Allen Robinson, Secretary-Treasurer, Dr. O. B. McCoy, Delegate to the State Society; Dr.

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A. R. Hammon, 1st Alternate; Dr. D. L. Owens, 2nd Alternate.

CONTRIBUTIONS FROM THE STATE OF ARKANSAS—NOVEMBER 1956 AMERICAN MEDICAL EDUCATION FOUNDATION

Dr. M. E. Blanton, Jonesboro	\$ 50.00
Dr. Milton D. Deneke, West Memphis	25.00
Dr. Cal D. Gunter, Siloam Springs	16.67
Dr. J. D. Huskins, Siloam Springs	16.66
Dr. Lewis Hyatt, Monticello	25.00
Dr. Robert F. Hyatt, Monticello	25.00
Dr. A. H. Maddox, Paragould	25.00
Dr. Harry E. Murry, Texarkana	25.00
Dr. B. J. Puckett, Siloam Springs	16.67
	<hr/>
	\$225.00

Woman's Auxiliary

Mrs. George Talbot of Pine Bluff was hostess for the November meeting of the Jefferson County Auxiliary, which was a luncheon at her home. Welcomed as special visitors were Mrs. L. Gardner of Russellville, state auxiliary president; Mrs. Jack Kennedy of Arkadelphia, president-elect; Mrs. Gordon Oates of Little Rock, vice president; and Mrs. J. W. Reed of Arkadelphia. They were introduced by Mrs. Walter Wilkins Jr., auxiliary president. Mrs. Gardner and Mrs. Kennedy spoke informatively to the group on the programs and organization of the auxiliaries.

Mrs. Gardner and Mrs. Louis Draeger of Ola, state corresponding secretary, were special guests of Pope-Yell County Medical Auxiliary in November, reporting on the district meetings in Fort Smith, Hot Springs, and Little Rock held earlier in the fall. Mrs. Charles Wilkins presented a program on Civil Defense as applicable in a community such as Russellville and Dardanelle.

Mrs. Gardner was also the guest speaker at a luncheon meeting of the Women's Auxiliary to the Bowie and Miller Counties Medical Societies, Friday, Nov. 30, in the Mirror Room of Hotel McCartney. Mrs. Gardner introduced by Mrs. John Walter Jones, chose for her topic "Responsibilities of a Doctor's Wife." Hostesses for the meeting were Mrs. Walter Barnes, Mrs. N. B.

Daniel, Mrs. Joe Tyson, Mrs. Brooks Tate, Mrs. H. E. Murry, Mrs. L. H. Lanier, and Mrs. J. W. Murry.

Hot Springs County Medical Auxiliary and Society were guests of Dr. and Mrs. Paul N. Means of Malvern for the November meeting. Special guests were Dr. and Mrs. Horace Murphy of Little Rock. As one of its projects the auxiliary has purchased two concrete benches for the county hospital grounds.

A Charter Member Day, honoring especially Mrs. Charles Travis Drennen of Apalachicola, Fla., who organized and became the first president of the Garland County Medical Auxiliary, was held by members of the Garland County Auxiliary in November. The event was held at the home of Mrs. James W. Leatherman, of Hot Springs. Mrs. Drennen, wife of one of Hot Springs' earliest and best-known physicians, has made her home in Florida since the death of Dr. Drennen in the early 1930's. Mrs. Drennen not only organized and served as first president of the medical auxiliary in Hot Springs, but was third president of the state organization.

Other honored guests were Mrs. E. L. Thompson, Mrs. Charles E. Oates, Little Rock, and Mrs. C. W. Garrison, Little Rock, who was the first state auxiliary president in 1925. They were introduced by Mrs. George B. Fletcher, poet laureate, who paid tribute to each one for her part in auxiliary work.

Mrs. O. P. Garner introduced the guest speaker, Mrs. R. G. Buchanan, nursing instructor at St. Joseph's hospital, who discussed "The Working Relationship Between Nurses and Doctors."

A poster depicting various phases of the local auxiliary's activities was shown to the group by Mrs. Robert H. Atkinson. The poster, made by Mrs. Atkinson and Mrs. Thomas M. Durham, was displayed at the recent Southern Medical Association meeting in Washington, D. C.

Mrs. J. B. Crawford of Little Rock, was introduced as a special guest and as a former state president.

Co-hostesses with Mrs. Leatherman were Mrs. E. K. Clardy, Mrs. R. L. Daniel and Mrs. H. King Wade, Sr. Mrs. Lon E. Reed is president of the Garland County Auxiliary.

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"Merry Christmas, Mr. Baxter" by Streeter was reviewed by Mrs. Blanche Wiseman at the December meeting of the Sebastian County Medical Auxiliary. Mrs. Wiseman is Executive Secretary of the Red Cross in Sebastian County. Hostess for the meeting was Mrs. J. S. Southard. A special honor guest was Mrs. Albert Nault daughter of Mrs. Robert Flaners, president of the Woman's Auxiliary to the American Medical Association. Mrs. Nault is making her home in Fort Smith while her husband is stationed at Fort Chaffee.

The national auxiliary this year has a goal of 25 per cent of all auxiliary members participating in some phase of civil defense. These fields include first aid, home nursing courses, stockpiling of supplies in homes and cars, preparing home shelters, and Ground Observer Corps. Mrs. J. J. Monfort of Batesville is chairman of the Civil Defense Committee and urges all auxiliaries to renew their efforts in civil defense this year. Last year our goal was 10 per cent of all auxiliary homes protected along civil defense lines and 10 per cent of all auxiliary members participating in some civil defense activity. The Southern Region, of which we are a part, showed the highest percentage, yet Arkansas fell short of its goal.

Among names suggested for the Auxiliary Newsletter are the following: ARKANSAS AUXILIARY ENVOY; MEDICAL MERCURY; STATE SHUTTLE; THE LASSIES' LASSO; THE MED-DAMES MERCURY; THE ARKANSAS AUXILIARY ANNOUNCER; THE ARKANSAS AUXILIARY ARTICULATOR.

There is a post office regulation concerning the use of the word "letter" in the title of a publication; it is our impression that such usage will place the publication in the first class mailing classification. A name for the newsletter will be selected soon (we hope) and if there are any more suggestions send them to the editor, Mrs. L. A. Whittaker, Jr., 2300 South "T" Street, Fort Smith. The second issue will come in January.

The Boone County Medical Auxiliary met Tuesday, Dec. 4, at the Hotel Seville in Harrison. Mrs. Bill Breit presided in the absence of Mrs. Bill Barron, president. After the business session the group went to the hospital for a joint meeting with the staff. A film was shown on "Vocational Rehabilitation Service."

The Christmas luncheon of the Woman's Auxiliary to the Pulaski County Medical Society was Wednesday noon, Dec. 19, in the YWCA in Little Rock. Mrs. William Cooper introduced Mrs. Mason G. Lawson, director of the Woman's Auxiliary to the American Medical Association. Also on the program was a ballet by students of Miss Lorene Lloyd. Hostesses were Mrs. Robert Watson, chairman, Mrs. Frank Bauer, Mrs. K. M. Kreth, Mrs. Robert Richardson and Mrs. John T. Riggart.

Mrs. C. W. Garrison, Historian of the State Auxiliary, is endeavoring to compile a complete roster, first of the charter members in each county with an organized auxiliary, followed up with a complete roll of those who have been and are now members. She hopes to have the roster completed in time for the state meeting in 1957.



TUBERCULOSIS ABSTRACTS*

Sponsored by
The Arkansas Tuberculosis Association

Chronic Progressive (Cavitary) Histoplasmosis as a Problem in Tuberculosis Sanatoriums

By Michael L. Furcolow and Charles A. Brasher,
The American Review of Tuberculosis and Pulmonary Diseases, May, 1956.

Chronic progressive histoplasmosis, in contrast to acute progressive or disseminated form, occurs primarily among older persons and is localized to the lungs except in the terminal stages. Both forms of the disease, however, are eventually fatal. The early stage of the chronic form is characterized by apical or subapical pneumonic infiltrations which progress to multiple thick-walled, usually bilateral cavities.

In order to avoid further confusion in terminology the descriptive term, chronic progressive (cavitary) histoplasmosis, is proposed to designate this type of disease.

The symptoms of this form of histoplasmosis are cough, moderate weight loss, usually a slight elevation of the erythrocyte sedimentation rate, occasional temperature, profuse sputum, sometimes hemoptysis. The disease is characterized by exacerbations; the patient usually seeks medical help after an acute bout of what is called "influenza," at which time pneumonic or cavitary disease is found. This bout may subside and the patient not be seen again until several years later, at which time he has a similar episode and further extension is discovered. Quite often the cavitation is only in one lung at the start and, later on, following another bout of so-called "influenza," the disease spreads to the other lung. In the early stages large cystlike cavities may be seen, followed later by spread of the process.

The disease usually progresses to fatal termination and just before this occurs there is dissemination of the fungus throughout the body with enlargement of the liver and spleen. Frequently at post-mortem examination *Histoplasma* may be cultured from all organs of the body.

*Reprint from National Tuberculosis Association.

In this type of disease the sputum is usually loaded with *Histoplasma capsulatum* and positive cultures are readily obtained. Serologic tests are usually positive and serve as a good screening tool. Tubercle bacilli are occasionally found, but most of the cases are not complicated by tuberculosis.

Chronic progressive histoplasmosis closely resembles reinfection type of tuberculosis, and could be considered to be reinfection histoplasmosis. This classification is based on the finding in some cases of negative tuberculin tests, positive histoplasmin skin tests, positive serologic tests, positive cultures for the fungus, and the presence of chronic cavitary disease of the apices in association with calcified lesions in the hilar area. Autopsy on such patients fails to reveal evidence of tuberculosis and the criteria of "chronic reinfection histoplasmosis" appear to be fulfilled.

A total of only 16 cases of chronic progressive cavitary histoplasmosis has been previously reported. It is the purpose of the present paper to show that this type of disease occurs frequently among patients in a tuberculosis sanatorium.

The studies to be reported have been conducted at the Missouri State Sanatorium at Mount Vernon, Missouri. This sanatorium has an average daily census of 550 patients, 85 per cent of whom are white and 15 per cent are Negro. Casual studies begun in 1952 revealed an occasional case of histoplasmosis. Between March and August, 1954, a systematic survey of the patients at the sanatorium was undertaken. During the survey, skin tests were made. The mycologic laboratory services were augmented and careful attempts were made to establish the diagnosis in all patients whose serologic tests were positive or whose diagnosis was in doubt in any way.

A case was termed "mycologically proved" if organisms typical of *H. capsulatum* were isolated by culture from the patient or were seen in tissues removed surgically or at autopsy. A "serologically proved" case was one in which the serologic tests for histoplasmosis were positive (1:8 or higher) on either of the complement-fixation tests or the precipitin test. Ade-

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quate cultural studies on the "serologically proved" cases usually revealed the presence of the organism. However, in many of these cases the patient had left the hospital before mycologic studies could be completed, or the disease was of the milder type from which positive cultures could not be obtained because of passage of time since infection.

These essentially casual studies for the presence of histoplasmosis in a tuberculosis hospital have now yielded a total of 19 "mycologically proved" cases and 95 "serologically proved" cases. These cases have been observed over a three-year period. During the three-months survey, 14 "mycologically proved" cases and 29 "serologically proved" cases were found. Of the 600 patients in the survey, 14 (2.4 per cent) were proved to have histoplasmosis by actual demonstration of the organism. In an additional 29 (4.8 per cent), the **diagnosis** of histoplasmosis was established by serologic tests.

In most cases the patients were more than fifty years of age, the males outnumbered the females, and all but one of the patients were white. In a number of cases, the onset of illness had occurred a number of years prior to determination of the etiology. The chest roentgenographic findings in almost all cases showed bilateral cavitation. Skin tests were positive to tuberculin in nine cases and to histoplasmin in 14 of the 18 cases tested. The serologic tests for histoplasmosis were positive in every patient. The organism was identified from every patient in most cases by culture from the sputum; occasionally, from cultures from the lung at operation or autopsy. The presence of the organism was demonstrated in tissue obtained at post-mortem examination in 2 cases in which fungal cultures were not done. The patients have been observed from a minimum of several months to a maximum of seventy-six months. Three patients have died. Progression of the disease occurred in nine of the 19 cases.

The finding that 7.2 per cent of the patients in a tuberculosis sanatorium have "serologically proved" histoplasmosis and that the actual presence of the microorganism was demonstrated in 33 per cent of the cases is indeed remarkable. It certainly calls for very serious consideration of the importance of histoplasmosis in tuberculosis sanatoriums. If it be assumed that a similar prevalence obtained throughout the general area of high histoplasmin sensitivity, quite startling figures would be obtained.

Calculations have been made of the number of tuberculosis sanatorium beds in the areas where histoplasmin sensitivity among adults exceeds 50 per cent. This area extends roughly from southern Ohio in a sweeping circle through central Indiana and Illinois, eastern Kansas and Oklahoma, northeast Texas, northern Louisiana, Mississippi and Alabama, and includes all of Tennessee, Arkansas, Missouri, and Kentucky.

If the findings of the present study prove to be generally applicable to the histoplasmosis area, some 1,200 patients in tuberculosis hospitals would be found to have histoplasmosis. These 1,200 cases would obviously furnish an important reservoir for differential diagnosis as well as a complicating factor in any therapeutic trial of tuberculosis.

The accurate estimation of this problem is obviously of fundamental importance to all persons concerned with the care of the tuberculous. These patients not only occupy tuberculosis beds, but they derive no benefit from antituberculosis therapy and may contract the disease. Furthermore, the demonstration of more cases of histoplasmosis should furnish an adequate pool of cases for trials of therapeutic agents so urgently needed in this fungal infection. Moreover, the finding of histoplasmosis in the degree which might be encountered in this area might permit further usage to be found for beds in these sanatoriums. At present the general treatment of histoplasmosis is similar to that of tuberculosis before specific therapy was found.

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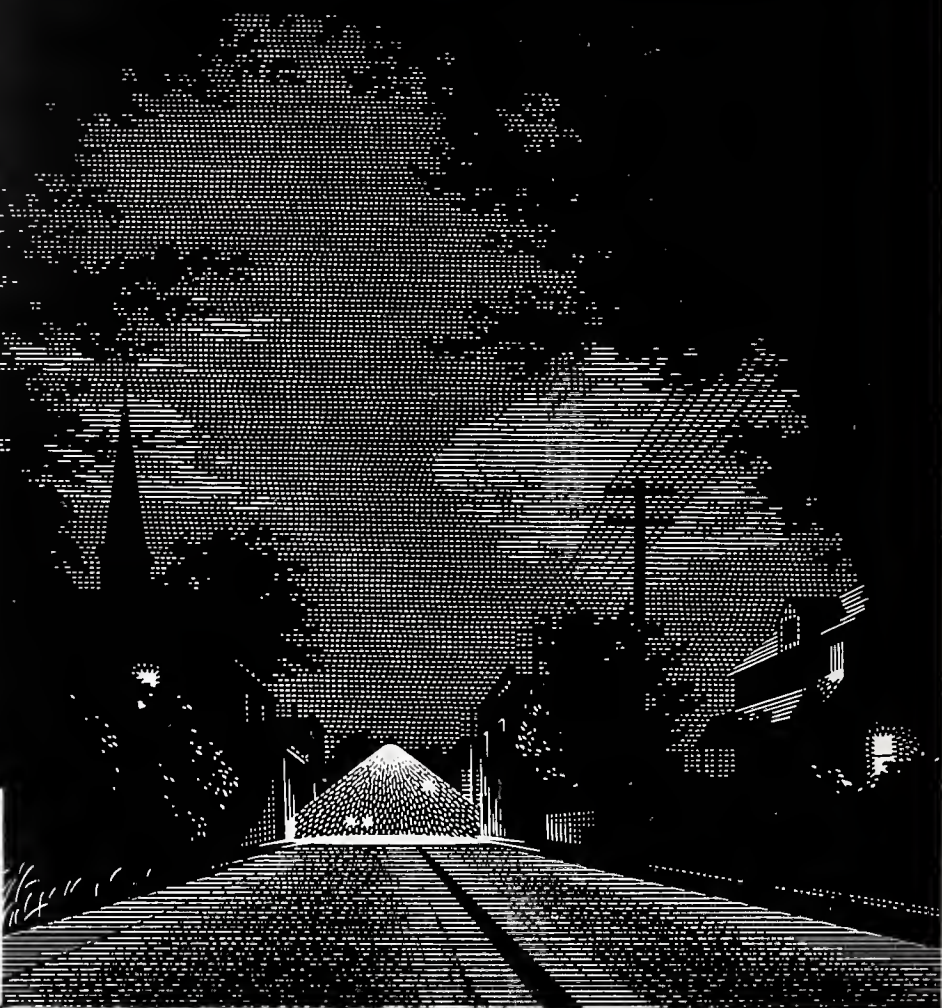
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The Patient With Benign Prostatic Hypertrophy

JAMES W. HEADSTREAM, M.D.*

Increasing life expectancy is necessarily bringing more men into the age of benign prostatic hypertrophy. Fifty-five to 65 per cent of men 55 years of age or over will develop prostatic enlargement and approximately 30 per cent of those in such a degree to make them candidates for prostatic surgery. Unfortunately not all those with indications for surgery will resort to such.

Reluctance may be on the part of patient or physician. Some such cases without proper advice slowly pass the point of no return with onset of infection, urinary stone, diverticula, renal deterioration and azotemia.

Prostatic enlargement cannot improve with time or medical treatment.

The purpose of this report is to re-emphasize the indications for prostatic surgery as well as the proper surgical approach with its low mortality.

INDICATIONS FOR OPERATION

A number of factors influence the indications for surgical treatment.

Severe subjective symptoms of obstruction, complete urinary retention, and large residual urine are absolute indications whenever the general health of the patient does not forbid operation.

In the presence of mild to moderate symptoms, one may be influenced by the tolerance of the patient to the discomfort. One patient may not object to nocturia of two to three times, while another will be so dis-

turbed that he cannot return to sleep and will demand prompt relief.

Patients with minimal symptoms may elect to defer operation and this is permissible as long as there is no evidence of obstruction damaging the urinary tract. This point can easily be settled by an excretory pyelogram. Of course, these patients must be kept under periodic observation.

The amount of residual urine is not necessarily proper criterion for surgical intervention, but in general a residual greater than 2 ounces requires prostatectomy.

As the bladder works against a bladder neck obstruction, there is compensatory hypertrophy in an effort to propel urine beyond this interference with urinary flow. When eventually the bladder musculature decompensates, then residual urine is present in varying quantities.

This process is analogous to cardiac decompensation in the presence of peripheral hypertension.

There is no correlation between the size of the prostate and need for surgery. Some of the larger glands offer little obstruction while the reverse is sometimes true with the smaller fibrous contractures of the vesicle orifice.

The final and deciding factor is to place ourselves in the patient's position and ask "Would I have a prostatectomy or postpone it in a similar situation?"

PREPARATION FOR OPERATION

The general appearance of the patient is even more important than the laboratory

*301 Waldon Building, Little Rock, Arkansas.

picture in selecting the time for operation. The patient which is active, alert and of good nutritional state and adequate urinary output is usually a good surgical risk.

Cardiovascular diseases, diabetes, anemia, etc., must be corrected before surgery is planned. This may demand prolonged catheter drainage in the presence of renal failure but should be continued as long as necessary for proper preparation. There is seldom need for emergency prostatectomy except in severe hemorrhage.

The urinary tract should be evaluated. The NPN estimation and concentration of urine is a practical examination. An excretory urogram usually gives proper information about the upper urinary tract as well as the presence of bladder calculi or diverticula. Cystoscopy is seldom necessary in those cases except with a history of hematuria.

OPERATION

There are four types of prostatectomy: (1) Suprapubic (2) Perineal (3) Transurethral and (4) Retropubic. While these are known as prostatectomy, the word is actually a misnomer since this implies total removal. In any conventional prostatic surgery for benign hypertrophy, there is only a removal of the adenomatous tissue from the containing surgical capsule. This is true of the three enucleation procedures as well as the transurethral operation.

There is an erroneous statement heard occasionally that an enucleation operation removes the possibility of malignancy occurring later, while transurethral resection would not act in the same manner. Eighty to 90 per cent of carcinoma of the prostate has its origin in the posterior lobe and this tissue is not touched by any of the conventional prostatectomies. Emmett (1) reported an observation on 102 patients who had previous open prostatectomy and who later came to transurethral prostatectomy. Of these, 66 were benign and 36 of the glands were malignant. Sixteen of the malignant cases had a lapse of ten years since previous open prostatectomy. Obviously carcinoma developed in the remaining tissue during the intervening years.

The type of operation depends on a number of factors, some of which are obscure and often are influenced by the personal preference of the surgeon.

It is often argued that recent advances in anesthesia and antibiotics as well as the utilization of transfusion has made open prostatic surgery as safe as the transurethral one. This notion is not supported by the facts. Mortality has been reduced but not to the level of mortality for transurethral surgery which varies from .5% to 1.5%.

The mortality of a reported series of 3,500 open operations before the antibiotic-anesthesia-transfusion era was 6.6 per cent while a series of 2,800 such operations collected from the literature in more recent years reported a mortality of 5.3 per cent (2). This represents a mortality of 3 to 9 times higher than that of transurethral prostatectomy.

Some advise transurethral prostatectomy for the poor risk cases and open prostatectomy for the better risk patients. The fallacy of this is, that if it is good enough for the bad risk, it should be even better for the good risk.

It is safe to state that suprapubic enucleation is easiest for the surgeon and hardest for the patient in terms of risk to life, discomfort and length of hospitalization.

A retropubic operation is somewhat harder on the surgeon and a little easier on the patient in terms of better control of bleeding and rapid healing. There is an added hazard of increased instance of osteitis pubis.

The perineal operation is the safest open operation in terms of risk to life, but carries a greater hazard of urinary incontinence and impotence than do the other methods. The possibility of rectal injury is always present.

Transurethral prostatectomy is hardest on the surgeon because it is very tedious in the larger gland. It is a procedure which requires more time and diligence to master, but it is worthwhile when the lower morbidity and mortality, greater postoperative comfort and shorter hospitalization are considered.

Transurethral prostatectomy is the treatment of choice in 90 per cent of the patients with obstruction from prostatic enlargements. Only approximately 10 per cent of the glands are larger than 100 grams. A competent transurethral resec-

tionist can remove this much tissue in approximately one hour's operating time.

This leaves a small per cent of glands as subjects for open prostatectomy, for it is not considered advisable to do multiple resections for removal of the larger glands, or to extend the operating time, as such would expose the patient to undue risk.

The object of transurethral prostatectomy is the same as in open prostatectomy, that is, to remove all the adenomatous tissue down to the level of the surgical capsule.

The so-called tunneling of the prostatic urethra is mentioned only to be condemned. An inadequate resection is worse than none and if the operator does not feel competent to do a complete removal, it would be much better to use some other technique. Partial resection results in devascularized tissue which will cause persistent infection and intermittent bleeding beyond the normal healing time.

Ordinarily a properly resected patient will have his catheter removed in three to four days and void a good, well-controlled stream.

To summarize my personal preference for choice of operation: One prostatic operation per lifetime is sufficient and this should be one of lasting result with proper safety. The gland that can be thoroughly removed in one hour's operating time should have a transurethral operation. If the gland is in the 10 per cent of larger glands and insufficient removal is probable by the transurethral route, then a suprapubic prostatectomy is the next choice.

The patient having open prostatectomy has approximately four times the chance to expire from the operation as the patient undergoing transurethral prostatectomy.

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Surgery of The Lacrimal Sac*

ALSON E. BRALEY, M.D.**

Epiphora, or tearing, is a common complaint of individuals visiting the Ophthalmologist. The literature contains many discussions of tearing problems. Many of these papers have been summarized in the Annual Reviews published in the Archives of Ophthalmology (1, 2, 3). The ophthalmologist may have difficulty finding the cause of this complaint. Among the causes of tearing may be conjunctivitis, misplaced puncta, occlusions of the canaliculi, edema of the bulbar conjunctiva and obstructions of the naso-lacrimal duct. While many other causes for epiphora have been discussed elsewhere, I am interested primarily here in obstructions in the naso-lacrimal apparatus.

One of the causes for epiphora is obstruction of the canaliculi. When the patient complains of epiphora the canaliculi should be investigated. These thin walled tubes can be easily damaged by probes and irrigating cannulas or by manipulation. It is interesting to report that the canaliculi frequently are composed of a thin walled tube leading to the sac, but with small diverticuli or out-pouchings from these tubes that lead toward the sac. These out-pouchings are most numerous near the opening of the puncta. In attempting to pass probes one must be very careful not to get into one of these small diverticula. Repeated passing of probes through the canaliculi may produce sufficient scarring so that the canaliculi may become entirely stenosed.

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**University of Iowa, Iowa City, Iowa.

In pathology of the drainage apparatus of the lacrimal system an obstruction of the naso-lacrimal duct is the most common. Nordlow and Vennerholm (4) reported that 84% of patients developed epiphora because of stenosis of the naso-lacrimal duct. Obstruction of the naso-lacrimal duct is almost always associated with dacryocystitis. Summerskill (5) divides dacryocystitis into three groups. Of all cases of dacryocystitis he makes the following distinction: 1) Idiopathic dacryocystitis. In this group there is no apparent cause for the development of dacryocystitis, but there may be a definite hereditary tendency. The instance is highest in women whom he thinks have a faulty development of the bony canal. The idiopathic dacryocystitis accounted for 76% of his cases. There have been histological studies performed on lacrimal sacs which have been removed and a few studies have been done in an effort to determine the cause of stenosis of the naso-lacrimal duct. The stenosis usually occurs at the point where the naso-lacrimal duct leaves the lacrimal sac. The soft tissue adjacent to the sac becomes densely infiltrated with lymphocytes and inflammatory cells which will cause a swelling of the mucosa and thus consequently occlude the duct. A probe may be passed readily through this area, but will increase the irritation and inflammation. In some instances, however, very gentle irrigation of the sac with one or two percent cocaine followed by penicillin, 2,000 units per cc., may be sufficient to shrink the membrane and allow passage of fluid through the naso-lacrimal duct. I have found that careful irrigation is necessary to prevent scarring in this tender tissue. If the naso-lacrimal duct is probed it will almost always stenose completely because probing in people over five years of age will produce severe scarring of the naso-lacrimal duct. I have successfully treated women in their late fifties by this method. The procedure may have to be repeated daily for a period of a week or so before the naso-lacrimal duct will remain open. It is also important to see these patients during the first few weeks of the obstruction of the naso-lacrimal duct. As soon as the first symptom of epiphora returns the patient should report and again be irrigated and the mucous membrane shrunken with cocaine. I never use more than one percent cocaine

which is washed out of the sac and replaced with a penicillin solution. In the majority of instances where the obstruction has been present for a period of several months this conservative therapy is not possible; however, I feel that it is worth while to try for a few days to see whether the naso-lacrimal duct can be opened, by conservative measures, without probing.

2) Infantile dacryocystitis accounts for 22% of Summerskill's cases. Nearly all of these were cured by simple probing. I believe probing should be done before five years of age. In Summerskill's (5) theories two percent of the infantile dacryocystitis were not cured by probing and required surgery of the lacrimal sac.

3) Acquired dacryocystitis accounted for only 2% of the total of Summerskill's (5) cases. The acquired dacryocystitis is the type that follows trauma, disease of the sac such as tuberculosis and other diseases, also tumors of the sac. The acquired types of dacryocystitis are the most difficult to repair. After a fracture of the nose, which may be rather severely fractured near the bridge, with the fracture extending through the lacrimal bone to involve the sac, the dacryocystorhinostomy should be performed at the time of the repair of the trauma. If this is not done it is almost impossible to get a functioning dacryocystorhinostomy through the dense scar tissue which forms at the site of the nasal fracture. Tuberculosis of the sac and tumors of the sac must of necessity be removed; however, when the sac becomes infiltrated, associated with chronic lymphatic leukemia, X-ray therapy may be of value in reducing the tumor so that tearing will stop. Surgery of the lacrimal sac may be divided into two parts. One is to connect the lacrimal sac to the nose, the other to remove the sac.

DACRYOCYSTORHINOSTOMY

Dacryocystorhinostomy is the most popular operation performed for repair of the obstructed naso-lacrimal duct. Nearly every ophthalmologist has his favorite method of performing this operation. There are a number of rhinologists who also feel that this operation for obstruction of the naso-lacrimal duct belongs to them. They have devised a number of surgical procedures. The various modifications of dacry-

ocystorhinostomy can be divided into roughly four types. 1) The intra-nasal operations. 2) The insertion of polyethylene or similar substances into the normal duct. 3) The anastomosis of the sac to the nasal mucous membrane. The best example is the Dupuy-Detemps procedure. 4) Tunnelization of the naso-lacrimal canal combined with insertion of polyethylene or similar plastic material. Most of the intra-nasal operations have been largely given up because of the complicated type of surgery necessary. Jones and Boyden (6) think that the operation belongs to the rhinologist. They certainly describe an operation that is conducted in three stages. The first stage of the operation is the preparation of a nasal mucosal flap. The second stage consists of a removal of the lacrimal bone. This is done by means of a special caliper and a thin bone drill or a long chisel. The third phase of the operation is the formation of the flap from the medial wall of the lacrimal sac. There has been many types of intra-nasal operations described, most of which require cutting through the lacrimal bone from the nose side and opening into the mucosa of the lacrimal sac. I have never had any personal experience with these although many have been reported in the literature. Summerskill (5) has reported extensively on the insertion of tubes into the naso-lacrimal duct. These are polyethylene for the most part and are inserted through either the upper or the lower puncta or through an incision made in the skin over the sac and inserted through the sac. There are also probes devised which can be passed into the naso-lacrimal duct and followed by a small polyethylene tube which is left in place. I have been disappointed in the post-operative results of this means. Summerskill (5) claims that polyethylene tubings of smaller sizes inserted through the naso-lacrimal duct were successful in 66% of the patients. In my experience the polyethylene tube, which is present in the naso-lacrimal sac, produces constant irritation. I have had several in which I have put polyethylene tubes, through the sac into the nose, and kept them in place by suturing them to the sac. While irrigation through the naso-lacrimal duct then will allow passage of a certain amount of material into the nose, the irritation of the polyethylene in the sac produces almost constant purulent discharge into the conjunctival sac. In

two instances, where the polyethylene tube has been in the naso-lacrimal duct for periods of three months and four months, associated with constant discharge from the sac, I have removed these tubes from the nose. For a short time after removal of the tube the naso-lacrimal duct will carry the material away, but within a period of a few days to a few weeks the naso-lacrimal duct will again close and scar shut.

The anastomosis of the lacrimal sac to the nasal mucous membrane has certainly been the operation of choice of recent years. There are many modifications and changes in this operation. One of the simplest is the one reported by Tyrrell (7). He makes an incision in the skin overlying the sac, isolates the sac, makes a hole in the nose either with a trephine or chisel, then removes the lateral mucous membrane from the nose and the medial mucous membrane from the sac and leaves it wide open, only suturing the skin. He begins irrigating the naso-lacrimal apparatus on the second post-operative day. He says the operation can be performed in five minutes. The Dupuy-Dutemps procedure consists of suturing the posterior wall of the sac to a flap of the nasal mucous membrane, then the anterior wall of the sac is also sutured to the anterior lip of the mucous membrane flap. The Stokes or the Mac Millan procedure consists of cutting the sac at the lower end where it enters the naso-lacrimal duct and then tying a silk, wire, or horsehair suture to this sac and bring it out through the naris and anchor the suture on the cheek. The sac is thus rotated to enter the nose through the ostium and is not sutured to the mucous membrane. Many ophthalmologists still perform this type of surgery and the results appear to be gratifying. Dr. P. J. Leinfelder of our Department prefers this operation and the results of his surgery are good. The fourth type of operation was devised by DeJean (8). He devised a pyramidal-shaped tube of acrylic resin which he places in the naso-lacrimal canal. This tube is flanged at the top so that it will not fall into the nose. The naso-lacrimal duct is open from above and the bony canal curetted out. He has also devised files with which to increase the size of the bone. The acrylic resin tube is loosely placed in the bony canal with the opening into the nose. DeJean and Boudet (9) have reported excellent results by this

method. I have used the pyramidal acrylic resin in one case. The result in this instance was fairly good but the tube kept filling up with purulent material and had to be washed out frequently. There was always a good deal of discharge from the nasolacrimal sac which would blur the vision of the patient. He finally asked to have the acrylic tube removed. It was removed and a Dupuy-Dutemps operation was performed at the time of the removal of the acrylic tube. This operation functioned very satisfactorily. After trying many of these modified procedures, I feel that the best operation is a modification of the Dupuy-Dutemps procedure.

TECHNIQUE OF THE OPERATION

Dacryocystorhinostomy may be performed under local or general anaesthesia. If it is under general anaesthetic I believe that the patient should be intubated in order to avoid blood and other substances getting into the trachea. Most of the time I do the surgery under local anaesthesia. The nasal mucosa is anaesthetized by cocaine using cotton pledgets on the middle turbinate and finally a cocaine pack is placed near the sphenopalatine ganglion. Skin anaesthesia is achieved by injecting uncaine into the inferior orbital canal and over the superior and inferior trochlear nerve. This usually gives excellent anaesthesia. I then feel over the medial canthus to try to find the anterior crest of the lacrimal bone. I make the skin incision, curved, beginning slightly above the medial canthal ligament and extending downward, following the line of the lacrimal crest. The incision is approximately an inch long. It is carried through the orbicularis muscle down to the crest of the lacrimal bone. This is usually easiest found at the junction of the medial canthal ligament and the crest of the bone. The incision is made through the periosteum down to the bone and the anterior leaf of the medial canthal ligament is cut, exposing the entire wall of the lacrimal fossa under the periosteum. The lacrimal sac is reflected laterally with the periosteum elevator. An eight or ten millimeter Iliff (10) trephine

is then used with a Stricker saw to make the opening through the nasal lacrimal bone using the crest as the center and the bony attachment of the medial canthal ligament as the upper edge. Care should be taken not to disturb the nasal mucous membrane. The circular piece of bone is then removed and an I-shaped incision is made in the mucous membrane of the nose and the same incision is made in the medial wall of the lacrimal sac. A double armed three-zero catgut suture with a special mounted half circle cutting needle. This double armed suture which is placed in the mucosa of the nose first and then through the flap in the sac. This suture is tied. Another double armed suture is placed in the anterior flap. This anterior flap is brought up and hooked to the periosteum at the anterior edge of the ostium in the nose. It is then sutured through the anterior leaf of the sac, then the sac is covered with the orbicularis muscle and the skin is closed with a subcuticular silk suture.

Recently we have been using a procedure similar to this but modified by Iliff's (10) suggestion of the use of a number ten or number twelve ureteral catheter. The upper end of the catheter is sutured into the lacrimal sac and the lower end comes out the naris and is taped onto the cheek. I believe that before doing a dacryocystorhinostomy it is well to know as much as possible about the sac and the size of the sac. When there is a large mucocoele and a great deal of pus can be washed from the sac on irrigation there is good evidence that there will be sufficient sac to do a dacryocystorhinostomy. Pre-operatively it may be worthwhile to use lipoidal or other radio-opaque materials in the sac and have x-ray pictures taken of the area to show the size of the sac and the extent of the obstruction. This has been done by many authors. Milder and Demorest (11), Romanes (12), Truchot and co-workers (13) have devised an ingenious method of obtaining x-rays of the naso-lacrimal duct. The x-ray film consists of a small dental film which is held in the back teeth toward the roof of the mouth but close to the soft palate. The x-ray beam is aimed so that it will be axial

with the naso-lacrimal duct. This followed a line which passes through the second molar. They claim with a little practice the pictures obtained are very good and the osseous canal can be readily seen. Iodized oil and other radio-opaque solutions can be used in combination with this technique to visualize the duct and the sac. These authors claim excellent results by this means in determining methods of treatment of aid in pre-operative diagnosis. While x-ray may be of some value in determining pre-operative diagnosis the clinical size of the sac should also be determined prior to surgery. So many times one is unable to fill the entire sac with radio-opaque material and an incomplete filling of the sac will result in only a small amount of radio-opaque material being seen in the x-ray pictures. This may give one the impression that he is dealing with a very small sac and when the operation is performed the sac may be much larger than anticipated.

RESULTS OF DACRYOCYSTORHINOSTOMY

Permanent success is usually achieved in from 85 to 90% of cases. Hefel (14) reported on 74 patients. His permanent success was achieved in 87-88%. Romaines (12) reported on 50 cases using the Dupuy-Dutemps operation. A cure was obtained in 90% of his patients.

I would like to report the results of 28 patients who had dacryocystorhinostomies performed of the Dupuy-Dutemps type. Twenty were successful with the first operation. The remaining eight had recurrence of symptoms and it was not possible to irrigate through the sac into the nose. I believe these eight patients are the most instructive since all of them were operated. In no instance, at the second operation, was the bony ostium closed. The closure occurred by the mucous membrane of the nose and of the sac coming together and forming a membrane between the two areas. This membrane would have nasal mucous membrane on the nose side and lacrimal mucous membrane on the sac side with a thin layer of scar tissue between the two layers. In two instances I opened the sac anteriorly and took out both layers of the mucous membrane between the nose and the sac leaving the bone free. The anterior

border of the sac was then resutured and the skin incision closed. One of these has remained open for two years, the other closed and was operated upon the third time. At the third operation the same situation prevailed. The entire area being closed by nasal mucous membrane and sac mucous membrane growing across the bony defect. In this instance an opening was made through to the nose and a rubber catheter similar to that described by Iliff (10) was inserted and sutured to the anterior wall of the sac. After a period of approximately seven days the catgut suture used to suture the catheter in place spontaneously released and the tube removed. While this patient has been followed only for about six months, it still functions normally. The other six patients were reoperated by removing the membrane between the sac and the nose. One has since closed but does not wish to be reoperated.

SUMMARY

The results of dacryocystorhinostomy of the Dupuy-Dutemps type or combined with the Iliff (10) procedure of inserting a catheter are certainly gratifying. In the great majority of cases, approximately 80%, one operation is all that is necessary; however, if the operation fails the second procedure is very easily done and the connective tissue between the sac and the mucous membrane of the nose is more likely to heal than to remain open, if a soft rubber catheter is inserted and left in place for a week or ten days. One should be careful not to leave any material in the sac since it may stimulate the development of granuloma such as was reported by Mahlen (15). Most of these granuloma contained talcum crystals or foreign body materials. Dacryocystorhinostomy should be performed on all cases of idiopathic dacryocystitis if there is enough sac to perform the operation. It should be attempted even when there is a very small rudimentary sac and may be combined with the use of a soft rubber catheter. Dacryocystorhinostomy should also be done in children and infants when probing is not successful. Dacryocystorhinostomy should be performed in children over four years of age. Polyethylene tubes and other acrylic resins inserted into the naso-lacrimal sac and naso-lacrimal duct act as foreign bodies and continue the

irritation which is already present in the sac. In my hands they do not produce the lasting results so common with a dacryocystorhinostomy.

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An Arkansan Goes To London*

WM. I. PORTER, M.D.**

May I say again, if you have not heard this before: "It is good to be home." Even the sweaty days of an Arkansas summer have not faded the thrill and satisfaction that come to the native when he views with travel-weary eyes the familiar sights of home.

I have long since concluded that most anyone can become a doctor of medicine, but I have been slow to learn that it takes a long time to get a medical education. The study of medicine is a living process that changes from day to day and from year to year. The course is ever onward and upward. We, in the United States of America, guard the last major stronghold wherein the physician is a free man. May we earnestly work to the limits of our strength to

preserve that freedom for ourselves and those who follow us.

When I went to London, England, last year, I fully expected to continue my life in the same way as before; but I was soon to learn that not all people of the world drive on the same side of the street. That basic observation was to be repeated. I was soon to learn that English can be spoken in many different ways. Yes, even photographs can give one a very distorted view of things as they truly are. Pigeon droppings on Nelson's monument in Trafalgar Square add beautiful contrast on the picture postcard, but to the naked eye they remain pigeon droppings. There will always be an England unless someone chips away the smoke and weather-darkened crust that covers everything, and all will crumble away. The

*Presented to the Pulaski County Medical Society, 11/16/56.
**1014 Donaghey Building, Little Rock, Arkansas.

centuries have slowly eaten away, Hitler's bombs took bigger bites, but what man built well still stands.

It would be difficult for one to imagine the hellish nightmare as was life for the Londoner during the months of the blitz or the Battle of Britain. Potential death was flying in every bomb, but that something in the heart of all true Englishmen gave them the fortitude to take it in their stride. Their historic churches, buildings, and famous landmarks were destroyed or gutted, damaged or threatened. Added to the physical danger must be mentioned the shortages of food and fuel and the hardships of all kinds, along with the despair of people in defeat. The English are an insular people, and their island was in danger.

The war drained the money and blood of the British Empire, but hard on the heels of battle came the further advances of socialization at home and the loss of far flung colonies. Cheap raw materials from controlled sources abroad, cheap labor, and industrial monopolies all over the world dwindled, and the pound began to shrink. The British people have continued to live in the past, and continue to scoff at competition while their world markets diminish. In their rationalization, the United States is given most, if not all, of the blame.

I was at the National Hospital for Nervous Diseases and the Institute of Neurology, or "Queen Square," as it is better known. This venerable institution is known the world over, and is considered by many to be the cradle of English, if not World, neurology. The names of Hughlings Jackson, Gowers and many others became known to the whole world while they worked there. Today, Sir Charles Symonds, Sir Francis Walsch, Sir Russell Brain, Carmichael, Critcheley, Greenfield, and others carry on in their shadow. In addition to house officers and registrars, there are clinical clerks and graduate students from all of the Commonwealth countries, Canada, the United States, France, and others. Doctors from all over the British Isles, working and studying for qualifying examinations, come there for special courses of study. Along with lectures and demonstrations, they still follow the time-honored bedside teaching. At this they are superb, and ward rounds hold one's interest as the classical neurological diseases are

presented with text book clarity. The consultants are aloof and formal, and one hesitates to step out of line. I found it quite difficult to tolerate this, and was always embarrassed for the patients when the cases were discussed.

Although we are criticized here in America for our diploma mills, the quality of medical education here is more uniform and more standardized. In England many of the hospitals have their own medical schools, and the graduate is considered more favorably if he is from one of the more respected institutions. A man's accent is very important, for it stamps the mark of his school. This is very important.

Hospital appointments for house officers and registrars are very difficult to obtain. A medical school graduate may be forced to work at most any job until he is accepted for a hospital appointment. When he has clerked for several years he may then become a house officer or registrar, where he is on the level of our intern. Years later, when he becomes a senior registrar, he is on the level with our residents. The surgical aspirant may scrub in the operating theater, as they call their operating rooms, for many years before he is allowed to do any responsible surgery. This may be a slight exaggeration, but is more often the case than not.

Until a specialist can qualify by examination, he is not allowed to practice. There is no set number of years, and there are many unofficial factors which determine the results of the qualifying examination. After all of this, the problem of hospital appointment arises, and the surgeon may have to wait more years until an opening becomes available, an older man retires or dies, or a new post is created. This and many other reasons account for the decreasing number of men entering specialties, and for the immigration of British physicians.

Under the National Health, a physician cannot usually go where he wishes and hang his shingle. If a certain area is covered on the established doctors' panels, it is considered squatting to begin practice there. A squatter finds his income very limited unless he can entice private patients or lure patients from another's panel. In small villages a practitioner has a very low

income if he does not have a full quota of patients.

Most of you are probably more familiar with the actual mechanics of the British National Health System than I, because of your study of it at its inception, and during the frequent scares about its adoption in this country. In essence, any person in the world may travel to the British Isles, and receive free of cost complete medical care, whether it be for a hangnail or the most serious operative procedure. In the early days of the system this was taken literally, and people from all over Europe and elsewhere made a visit to England to get dentures, hearing aides, spectacles, and the like. Much of this has been changed, and the patient pays at only a reduced price. Many people told me that it was easy to get a box of facial tissues, certain types of shoes, personal hygienic materials, and even types of undergarments, by medical prescription. Fortunately, most of the flagrant abuses of the program have been abolished. A prescription costs the patient only one shilling, or fourteen cents.

My family was on the panel of a general practitioner, who was highly recommended by friends who had been there for some time. We called him on the telephone and asked if he would accept us. Then we went to our local welfare office to register. In short order we received our cards, numbers, etc. We were given a milk book for the baby, whereby we bought whole milk at half the usual market price. Concentrated orange juice and crude codliver oil were also obtainable at a token price. Jane was allowed to take Susan to the well baby clinic each week if she wished. A physician in general practice, then, is like any here, except that he treats his patients in queue fashion (the war certainly taught the British people to keep in line, or queue as they call it), receives no money or makes no charges, has to have on hand a number of required forms, have the patience of Job, a nose insensitive to bad smells, and the mind of a robot. If an emergency arises that requires a hospital bed, several calls are required to find a vacant bed that may be in any part of London. The central ambulance agency is called, and the patient is then lost from his doctor. If the patient has a purely elective surgical condition, the re-

quest is made for a surgical consultation. This might take several months or more.

The program has stifled the general practitioner, and has considerably reduced his effectiveness in the profession, and has lowered his social position. He is almost completely cut off from his patient after he is referred or hospitalized, and continuity of care is lost. After the patient reaches the hospital, a strange group of house doctors take over. The family has a sad task trying to find the patient's doctor for any information.

There is a great tendency for prolonged hospital days, because of the attitude that it is all free. We see this to a somewhat comparable degree in our charity institutions and government hospitals. The abuses of this attitude are reflected on the taxpayer and, as you know, the cost is continually increasing.

The British physician and the British people brought a lot of their ills on themselves. The class society ruled with an iron hand for centuries, without compassion for those beneath them. Those with gilded names and from wealthy families lived and prospered on cheap labor and cheap coal. The working class were as spittle beneath their feet. Those who could not pay for medical care simply did not get it. When the Labor Party won the government, the tide began to turn, and the program of socialization rolled with gathering momentum. The medical fees were based on a 1939 average figure, and here is where the doctors first got it.

For years now the British people have given a liberal interpretation to their tax laws, and the physicians were no exception. The 1939 reported incomes were the carefully altered figures of men saving for their old age. As a result, the physician's income was calculated on that level. Governments everywhere are slow to alter certain mistakes, and they have not gotten around to raising the pay of their overworked doctors. Today the average doctor makes up the difference by having all the private patients he can solicit. He then reports an income amount that will not offend his tax collector's sense of fair play.

There are many physicians in private practice in London. They may or may not do any teaching. Most of their work is done

in nursing homes, the American equivalent of a private hospital. If one consults a doctor as a private patient, he gets excellent service and attention, and all doors are opened. For this, it must be said, one pays through the teeth.

When one walks along Harley Street in London he finds, much to his surprise, a fairly short street, lined on either side with narrow entrances and the ever-present iron railings. At most every door may be seen small brass name plates, from one to eight or ten in number, that bear the name or names of those who have consulting rooms inside. Many of the plates are worn smooth from daily polishing. Once you have located your doctor's address, you ring the bell. After a few minutes standing in the cold and rain you are admitted to a room that appears to be the entrance hall to any London house. The white uniformed nurse or receptionist is nowhere to be seen, but instead, a person in the traditional street dress. One keeps his overcoat on and looks for a source of heat, that is occasionally found in the guise of a few red coils of the electric fire, or a few lumps of smoldering coal in the fireplace. Your doctor may be wearing a formal morning suit, complete with batwing collar, or a simple business suit. You are treated coolly, but courteously, and so it goes. They have their way, and we have ours.

I should not like for you to get the impression that I do not think highly of the British physician, for they have men there just as capable as we have here. I suppose I should say that I am opposed to their system. My loyalty is to my country, and I bow to no King or Queen. In my school years I was taught, in some measure, what it means to be an American. Since then I have learned what it means to be an American. True, it is a philosophy of living, a way of life, but I think we have made democracy work here. In our country nobil-

ity can begin or end with the individual. It is up to him, regardless of his status of birth or his school.

One cannot say that the National Health System in Great Britain has not been, and is not a success. It is a tremendous success, and it will not disappear. The people have that mythical sense of security that protects them against fear of medical indebtedness, and all of that. It is all free, to all! The golden egg laying goose is slowly becoming cyanotic, and it is in the throes of congestive failure. Doctor Uncle Sam helps him along with a shot of green back digitalis from time to time. This, and other drains on the treasury, cannot continue always.

Many of the general practice men are collecting a fee, such as it is, now, where before he collected nothing. The hospital physician is now free to order any laboratory procedure in the book, without wondering if the patient can afford to pay. If the patient lives long enough, there is unlimited consultant services. The cashier's office in hospitals is abolished. The doctor has become a technician, and ranks as such in the eyes of his patients. Were they members of a labor union, the physicians of England would be in a state of perpetual strike against low wages. They have lost the battle, for they know that they have been defeated. They have been hired by the Government, and their boss is John Bull.

Our free enterprise system in this country, even with all of its professed ills, still offers to everyone the chance to work, to better himself, to compete with his fellow man, in the way that I am convinced God intended. If we can continue the fight to retain our democratic ideals, if we can discipline ourselves and live in truth above deceit, and if we always respect the dignity of man, regardless of race, creed or color, then the United States will never lose, even though its foundation be shaken to the core.

◆ *What's* NEW ◆

PATHOLOGY

WM. S. ORR, JR., M.D.*

As in other specialties, the Pathology Department has developed some new methods as well as revived and utilized old methods. This presentation is by no means complete, and will simply be a resume of some of the more acceptable procedures offered in the field of pathology.

The modern hospital laboratory is made up of two very distinct departments under the direction of the pathologist. The clinical laboratory is divided into separate divisions — hematology, urinalysis, bacteriology and mycology, chemistry, blood bank, and serology; and the anatomical department controls the surgical and autopsy materials. The strides made both in newer methods of study as well as in the experimental field have added much to the laboratory so that it is of greater assistance to the physician in the diagnosis of disease.

In hematology, the use of the hematocrit and hemoglobin in deference to the use of the red blood cell count is now routine in many institutions. This establishes the ratio of packed red cells to the plasma volume and offers a truer picture of the red cell volume of patients. It can be done with a small amount of blood by the capillary method though tube methods are still used, and are excellent procedures. The use of photoelectric cells to measure hemoglobin, particularly alkaline hemoglobin, is the best method of evaluation.

Through the past several years, a greater use of bone marrow examinations has been noted. The bone marrow is obtainable in one of several sites, using either the sternum, the spinus process of the vertebra, the iliac crest, or in infants and small children, the tibia may be used. Smears are examined, and if possible the small frag-

ments are picked out of the aspirated marrow and clumped together for fixation by formalin and stained by the H&E method for examination. This has aided not only in the study of the blood dyscrasias but also in the diagnosis of multiple myeloma, and evidence of secondary metastases involving the marrow. The procedure can readily be carried out in the physician's office, as well as in the hospital. Staining is with the use of the routine Wright stain, though counter staining by Giemsa's stain will often offer greater differentiation of cell types. The examination of peripheral blood or bone marrow for the lupus erythematosus cell (the L. E. cell) is now a common procedure. This procedure in capable hands is easily done and gives an added diagnostic tool.

In bacteriology, the advent of the antibiotics has altered in many instances the use of the bacteriological laboratory. However, in the past few years a greater emphasis is being placed on definite identification of organism, so that bacteriological study is gaining prominence again in the diagnosis of disease. Newer methods of culture and newer types of media have aided greatly in procuring growth and in developing cultural characteristics of the bacteria and fungi. Here again, using sterile technique, material may be collected for smears and culture. The use of sensitivity tests has aided in the selection of the proper therapeutic agent or agents to use with specific infections.

These tests are now almost routine and a multiplicity of culture plates are now required because of the innumerable discs that are used in order to estimate the effect of the therapeutic agents upon the various types of bacterial flora involved.

*926 Donaghey Building, Little Rock, Arkansas.

In some instances it is necessary that a primary broth culture be inoculated, and from that culture, the plates made for sensitivity studies.

A complete urinalysis is a must, and there is no better test of urinary function. There are some simplified clinitest methods for estimating albumin, sugar, bile, urobilinogen, etc. These are quite satisfactory.

In chemistry, a multiplicity of new procedures and revised old procedures have been brought out in recent months. Of prime importance is an available method for the estimation of the protein bound iodine, which is a measure of thyroid function, and in many instances offers a much better criteria for disease than the basal metabolic rate. However, by no means is it indicated that the BMR should be entirely forgotten. The preparation of patients for estimation of protein bound iodine requires only that the patients be free of iodine and thyroid intake and mercurial diuretics for a period of time prior to obtaining the specimen. They should not have had radiological gall bladder series or an intravenous pyelogram using any of the iodine containing dyes prior to PBI determination. They should wait three to four months after these tests before a PBI can be run. A careful questioning of the patient by the physician prior to obtaining the blood is a great help. Questioning patients about cough medicines is essential for many of the proprietary cough medicines do contain iodines and thus lead to contamination of the blood.

The patient does not need to be fasting. Fifteen to eighteen cc. of blood is drawn. Wherever possible, the blood should be drawn in the laboratory doing the test, but it can be mailed satisfactorily. Patients who have had any mercurial diuretics should wait at least 72 hours before the blood is taken. Care must be taken to make sure that the syringe, needles and tubes are free of any mercury or iodine contamination. Scrupulously clean glassware is a must with this procedure. Results indicate that the euthyroid range is from 4 to 8 micrograms, hypothyroid below 4, and hyperthyroid above 8 micrograms. This procedure offers a much truer estimation of thyroid function than other methods of study now available. Comparative results be-

tween the estimation of the protein bound iodine, the use of radio-active iodine uptake study, and the use of the basal metabolic rate have shown that the PBI gives a higher percentage of accuracy, being of a great value particularly in the subclinical and mild hypothyroid states.

The use of electrophoresis for the fractionation of the protein content of the blood is another new procedure available. Estimation of alpha, beta and gamma globulins, fibrinogens, and albumin content can be measured and offers a much truer picture of the protein pattern of the blood. This is based on the migration of charged particles in an electrical field and since proteins are charged particles, this provides a method for their qualitative and quantitative values to be established. Many articles in the literature can give more details if desired.

The use of paper chromatography for the identification of urinary sugars and the study of amino-acid patterns has been used in some laboratories, but at the present time it seems to be limited to the larger research centers. This procedure should offer much in the future.

The study of transaminase activity, which becomes altered particularly in myocardial infarctions, though also affected by acute hepatitis and metastatic carcinoma of the liver, has added much to the physician in the study of patients with questionable coronary attacks. The usefulness of this procedure in acute coronary attacks depends on running the test as soon as possible for the elevation occurs soon after infarction and will return to normal within a few days.

The use of flame photometry is now a recognized asset which offers an accurate and rapid method for determination of sodium and potassium levels in the study of electrolyte balance. Here, with small amounts of blood, it is possible within a short period of time to give a very accurate picture of the acid-base balance of any given patient. This combined with the carbon dioxide combining power and careful urinary studies can in many instances be the difference between life and death. The Flamephotometer has been used for many years in industry, but only in recent years has it come to the front as an added method

of study for clinical hospital laboratories. There are several types of machines available, based on various alterations of power supply and fuel, as well as various photoelectric setup to record and register results. However, the principle is still the same, that of burning a fine mist spray of the patient's serum in a high flame and then by the use of selective filters, prisms, grids, and slit openings, and a photoelectric cell, measuring the degree of color of the sodium and of the potassium content. This is always reported in milliequivalents per liter. Milliequivalents offer the easiest method of establishing a true balance. For one milliequivalent of an anion will be equal to one milliequivalent of a cation, thereby establishing a 1:1 ration.

In the blood bank, it is now an established fact that in addition to ABO studies, complete Rh studies must be done utilizing CDE/cde. Cross-matches must be carried many times by saline, albumin and Coomb's methods. Blood has become so important in therapy that all precautions must be taken for this can be very dangerous therapeutic agent. The utilization of the Coomb's tests in Rh negative mothers and in certain hemorrhagic disorders is now routine.

In Serology, the VDRL test is now a standard screening method. This test is quite sensitive and false positives are not uncommon.

In the other major division of the laboratory the department of Pathology, the use of various special stains in the study of tissues have added greatly in giving the pathologist additional methods, both for the study of disease processes, as well as aiding in particular diagnosis.

Perhaps no test offered by the laboratory has received so much publicity as has the Papanicolaou staining method for the study of cancer cells. This has received extensive publicity through the lay press, both by newspapers and magazine articles, and consequently has been placed quite vividly before the public eye. Obtaining of the specimen is an easy procedure depending upon the type of specimen desired. Vaginal and cervical smears for the study of carcinoma of the cervix and carcinoma of the endometrium are easily obtainable. The study

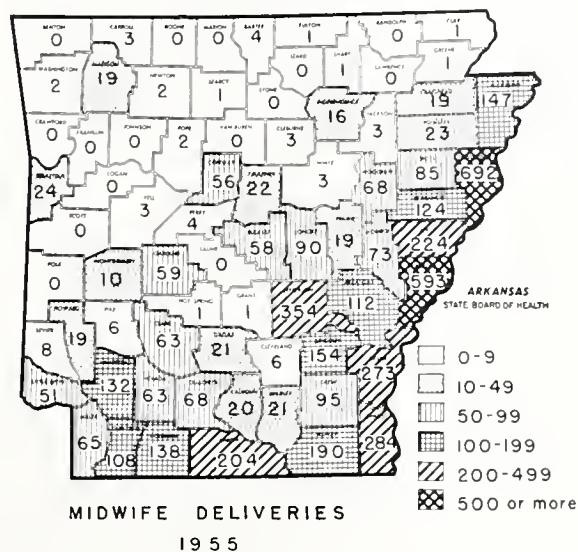
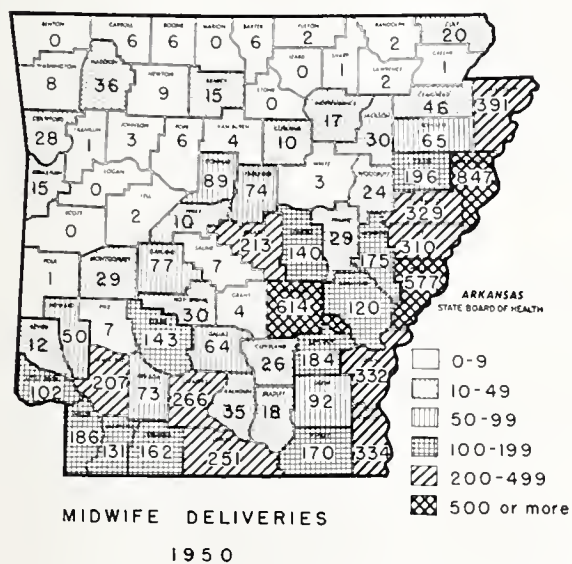
of the various exudates and study of the various fluids from serous cavities, such as ascitic fluid, pleural fluid, etc., have been utilized. Also available are the study of bronchial washings and sputum for lesion of the respiratory tract; the study of gastric washings for the lesions of the upper G.I. tract; and the study of urine for lesions of the urinary tract. Now, work is being done with Papanicolaou studies on cerebral spinal fluid and fluids from joint spaces. Actually, the method is not new; it has been known for many years but the training of qualified personnel has increased the use of this procedure.

With fluids it is best to spin the specimen down and use the sediment, but with cervical smears and in many instances with sputum, direct smears can be made from the substance obtained. These should be fixed at once in an alcohol-ether solution of equal parts, then they can be left in this particular solution prior to the staining by the Papanicolaou method. However, this is not a study to be carried out by anyone. It requires trained personnel to examine cytological smears. In areas, in which hundreds of these smears are taken daily for study, the cytologist utilizes screeners, who are trained technologists that screen the slides and then give the suspicious one to the pathologist for study. It is possible to stain these smears other than by the Papanicolaou method by the use of modifications of hematosylin eosin method as well as other stains. Let me emphasize again, that in utilizing this procedure, the smears should be studied only by trained personnel.

I have only mentioned a few of the newer procedures available to the physician in the laboratory, both from the clinical as well as from the anatomical standpoint. There are many more, and a closer relationship between the clinician and the pathologist will in many instances aid in the utilization of these newer procedures in the study of patients. A final warning, that the quality of the work from the laboratory depends upon the trained personnel who carry out these various procedures. There is no substitute for well-trained technologists in the clinical laboratory, and these persons should be under the direct supervision of one trained in the study of clinical and anatomical pathology.

ARKANSAS PUBLIC HEALTH AT A GLANCE

Five Years of Progress In Control Of Midwife Deliveries*



Year	Total Births in Arkansas	Total Delivered by Midwives	% Delivered by Midwives	Number of Midwives	% of Midwife Deliveries by Mid- wives with a Permit
1950	45,699	7,475	16.4%	960	75%
1955	42,223	4,912	11.7%	493	92%

COMMENTS

Many babies are still delivered by midwives in Arkansas. The Maternal and Child Health Division has had a program of midwife control in operation since 1925, designed to make delivery by midwives safer for mothers and their babies. Older and less competent midwives are asked to retire, so that the total number of active midwives has been reduced faster than the total number of midwife deliveries. Midwives must secure an annual Permit in order to practice. To secure a Permit they must attend monthly classes, maintain standard

equipment, and meet health standards (physical examination, chest X-ray, serology).

The eventual elimination of deliveries by non-professional ("granny") midwives depends on the ability of the physicians in each county to take over the task of delivering these mothers. Notable progress has been made in some counties, while a few have shown little or no progress. (In a few cases an apparent rise in midwife deliveries in 1955 is due to non-reporting, or to late transmittal of birth certificates from the county, such as was the case in Woodruff County in 1950.)

*Sponsored by the Arkansas State Board of Health.



Editorial

MODERN FADDISM

R. B. ROBINS, M.D.

Guest Editorial

A drug survey indicates that last year 3 out of 10 drugs prescribed by physicians were tranquilizing drugs. Are we becoming a relaxed nation of slowed-down individuals subsisting on a variety of ataraxic drugs?

We are always looking for a new crutch in medicine to lean upon, but it is a fact that these compounds do have side effects and physicians need to observe some degree of caution. As the years come and go we see many fads in medicine. The tranquilizing drugs apparently are the fad at the present moment.



The Value of Public Relations To The Medical Society

JEROME S. LEVY, M.D.

Guest Editorial

Good Public Relations produces intangible assets. Poor Public Relations produces tangible liabilities! The intangibles exist within the good will of the public as a whole. This is created in the public mind by the participation of the doctors in various clubs, organizations, and church groups which develop the civic, cultural, and religious values of a community. This is created by our interest in the protection of the Public Health in and by the demonstration of our willingness to support efforts to improve the Public welfare. Too often this good will remains silent or merely whispers of our altruism. Even then it is a powerful support for us when we work for the improvement of the health of our community—and when we are maligned by those who work for socialized medicine or the welfare state. The tangible liabilities can be realized readily as one reads the attacks on the American Medical Association or upon doctors in general which are played up in the press and other avenues of publicity. Labor leaders, Union representatives, Legion spokesmen, and left wing politicians are loudly vocal and make good reading in their often vituperative charges against us. It is important to present our purposes so that they may be understood

and recognized in their true meaning. If we fail to do this, we have failed to establish good Public Relations. Then, what is charged against us is believed and the whispers of our friends die out. Poor Public Relations makes us something unfamiliar and the unknown represents evil to most of the community. In a recent trip in the East, the writer heard much criticism of the ultra-conservative American Medical Association which "is always against something and never for anything." "Individual doctors are wonderful people especially one's own; but doctors working together are to be condemned," says our Poor Relations. We must make our Public Relations good ones, informing others that we are working for the public good and fighting a winning fight for its protection. By our participation in the innumerable activities of our community life we can promote better Public Relations and gain spokesmen for Medicine in its struggle against Socialized Medicine. "The evil that men do lives on, the good is oft interred with their bones" has been too true for us. Good Public Relations, actively participated in by all doctors, will reverse this so that the good we do lives on and the "evil" claimed of us cannot be found. The value of good Public Relations will be found in the intangible assets of good will and good deeds!

ARKANSAS MEDICAL SOCIETY MEETING

APRIL 23-25, 1957

The Program Committee of the Arkansas State Medical Society has arranged the program tentatively outlined below for the Annual State Meeting, April 23, 24 and 25, 1957. The official program starts Tuesday, April 23, so that members and guests will not have to travel to the meeting on Easter Sunday, April 21, but may travel on Monday, April 22.

The climax of the Annual Meet this year is the Professional Dedication of the large new University of Arkansas Medical Center in Little Rock on Thursday morning, April 25, and all of the program on that final day of the Annual Meet, Thursday, April 25, will be presented at the New Center.

There will again be an active Sports program—to begin this time on Easter Sunday, April 21, for the local members, and to continue and conclude on Monday, April 22. Awards for Sports Activities will be presented in a special ceremony at the end of the first official day's activities, Tuesday, April 23.

All exhibits will again be in the large Exhibit Hall of the Robinson Auditorium, and the spaces have been rearranged so as to allow more of commercial and scientific exhibits, and to allow an area for continuous showing of medical movies, arranged by Dr. Gilbert Dean from the film library of the American College of Surgeons. Dr. Lawrence Zell has arranged also many other fine scientific exhibits, including a Demonstration of Fracture Treatment (The Arkansas Orthopedic Society, arranged by Dr. Dixon Conlin), a Demonstration of Gross Pathology Specimens (The Arkansas Pathological Society, arranged by Dr. Merlin Kilbury, Sr.), and an exhibit offering a Physical Examination for every M.D. (including chest x-ray and ECG examinations, arranged by Dr. Randolph Ellis, with cooperation of the Arkansas Academy of General Practice, The Arkansas Heart Association and the Arkansas Trudeau Society, and the Arkansas State Board of Health).

All luncheons will again be in the Hotel Marion, using various available rooms.

Note that there will be a large General Session luncheon for all members on each of the first two days, Tuesday and Wednesday, noon. We hope that all members in attendance will plan to be at each of these luncheons, which will feature our guest speakers of that particular day in a Question-Answer period.

Various specialty groups will meet concurrently with the Annual Meet, but the General Program has been so arranged to allow General Sessions, featuring our invited guest speakers, all day long in the Lecture Hall of the Robinson Auditorium, 9:00 A.M. to 5:00 P.M., so that there will be a continuous excellent program for all those not interested in the specialty group programs. We certainly hope that the members of the Society will take advantage of this special effort to provide quality program, and will attend the General Session throughout the day, as well as the General Session luncheons.

Dr. and Mrs. Fount Richardson will be hosts at a coffee at the Hotel Marion, Monday April 22, 5:00-7:00 P.M., and all members are invited. Various specialty group banquets and luncheons are being arranged and will be announced later. The annual State Medical Party will be on Thursday evening, Hotel Marion Ballroom, 8:30 P.M., for our members and our guests. Our guests here will include the many guests invited for the Professional Dedication of the New Medical Center, and because of the numbers anticipated, we do not plan an annual banquet, but only a party, with coffee, soft drinks and dancing. The New Medical Center will be hosts at a party honoring their specially invited guests on Wednesday evening, and all members of the Medical Society are invited; the time and place will be announced later.

The House of Delegates will be asked to meet at the end of the Tuesday and Thursday sessions, probably about 5:00 P.M. on Tuesday, and 3:30 P.M. on Thursday. The Tuesday meeting will be in the Lecture Hall of the Robinson Auditorium, and the Thursday and final meeting will be in the New

Medical Center. The Council meetings will be announced later, but it is hoped they can be early morning meetings again.

The exhibits will all go up in the Exhibit Hall of Robinson Auditorium on Monday, April 22, ready for viewing Tuesday, April 23, and the exhibits must be dismantled and out of the Auditorium by 5:00 P.M., Thursday, April 25. A special invitation to view the exhibits will be given the Arkansas Medical Auxiliary and the students of the University Medical Center on Thursday morning, April 25, 8:00-10:00 A.M. Exhibit awards are planned.

Special evening meetings will be held by the Little Rock Academy of Medicine and the Little Rock Academy of Surgery, and the times and places and programs of these meetings will be announced later. The popular and instructive Cancer Program will be arranged again for Monday, April 22, by the Arkansas Chapter of the American Cancer Society.

On Thursday, April 25, all of the Scientific program will move from the Auditorium to the New Medical Center, as noted on the program outline below. In addition to the scientific programs arranged on this day, the Memorial Service will be held at the New Center, the Professional Dedication Service of the New Center will be held on the grounds of the New Center, and there will be conducted tours over the en-

tire Center all through the day. There will be an Academic program continuing at the New Medical Center through Friday, April 26, and all members of the State Medical Society are invited and urged to attend.

We hope again that there will be many class reunions during the period of the Annual State Meeting. If we can be of any aid in arrangements for these, please feel free to call on us. Dr. John Wood of Mena has agreed to correlate these efforts, if asked.

The Program Committee wishes to publicly express thanks to Mr. Paul Schaefer, to Dr. Fount Richardson, to Dr. Alfred Kahn, to Dr. Jerome Levy, to Dr. Douglas Lawra-son, and to the many others who have been such a help in arranging this annual meeting, 1957.

The outline of the tentative program follows.

Program Committee, Arkansas Medical Society, 1956-57:

Joseph Norton, M.D., Little Rock,
Chairman

John D. Olson, M.D., Fort Smith

Randolph C. Ellis, M.D., Malvern

John P. Wood, M.D., Mena

Wm. B. Harrell, M.D., Texarkana

Frank G. Kumpuris, M.D., Little Rock

Lawrence Zell, M.D., Little Rock

Wm. L. Steele, M.D., Little Rock

Merlin J. Kilbury, Jr., M.D., Little Rock



DISTINGUISHED GUEST SPEAKERS

81st ANNUAL SESSION, ARKANSAS MEDICAL SOCIETY

LITTLE ROCK, APRIL 23-25



JOSEPH H. OGURA

Washington University School of Medicine
St. Louis, Missouri

General Session, Tuesday, April 23rd, 9:30 A.M.
"Hoarseness, Diagnosis, and Treatment"



STEVEN J. MARTIN

St. Francis Hospital, Hartford, Connecticut
General Session, Tuesday, April 23rd, 2:25 P.M.
"Contributions of the Anesthesiologist to the
Medical Profession"



HANS G. SCHLUMBERGER

Department of Pathology
Ohio State University College of Medicine
Columbus, Ohio

General Session, Tuesday, April 23rd, 9:55 A.M.
"Ulcerogenic Cerebral Lesions and
Pancreatic Tumors"



JOHN ALDES

Cedars of Lebanon Hospital
Los Angeles, California
General Session, Wednesday, April 24th, 9:30 A.M.
"Indications and Contra-Indications in
Use of Ultrasonics in Medicine"

DISTINGUISHED GUEST SPEAKERS

81st ANNUAL SESSION, ARKANSAS MEDICAL SOCIETY

LITTLE ROCK, APRIL 23-25



SEYMOUR HERSHMAN

Chicago, Illinois

General Session, Wednesday, April 24th, 2:00 P.M.

"Hypnosis in Medicine and Surgery"

STEPHEN ROTHMAN

Chicago Medical School, Chicago, Ill.

General Session, Wednesday, April 24th, 3:15 P.M.

"Urticarial Diseases in General Practice"



H. B. BURCHELL

Mayo Clinic, Rochester, Minnesota

General Session, Wednesday, April 24th, 11:35 A.M.

"Pulmonary Hypertension"



**PRELIMINARY PROGRAM
EIGHTY-FIRST ANNUAL SESSION
ARKANSAS MEDICAL SOCIETY**

April 23, 24 and 25, 1957

**Robinson Auditorium
and
University of Arkansas Medical Center
Little Rock, Arkansas**

ANNOUNCEMENTS

REGISTRATION—

On Monday only, the Registration desk will be in the lobby of the Hotel Marion from noon until 5:00 P.M. On Tuesday, Wednesday and Thursday, the registration desk will be in the Garland Street entrance to Robinson Auditorium.

Delegates are requested to register as early as possible, presenting credentials in proper form at the time of registration. Members and visitors are required to register, as admission to all sessions will be by badge. Bring your 1957 membership card to facilitate registration. Members of the American Medical Association from other states may register as guests.

Special telephone service will be maintained at the registration desk. Phone number FRanklin 4-5696. Advise your office that you can be reached at that number during scientific meetings.

MEETINGS OF THE COUNCIL

The Council of the Arkansas Medical Society, including past presidents, will meet as follows:

Monday Night, April 22nd — 8:00 P.M., Marion Hotel
Tuesday Morning, April 23rd — 7:30 A.M., Marion Hotel
Wednesday Morning, April 24th — 7:30 A.M., Marion Hotel
Thursday Morning, April 25th — 7:30 A.M., Marion Hotel
Thursday Afternoon, April 25th — Immediately following
Final General Session

FIFTY-YEAR CLUB

A breakfast for members of the Fifty-Year Club of the Arkansas Medical Society will be held in the Marion Hotel at 7:30 A.M., Wednesday Morning, April 24th. For reservations, members are requested to contact Dr. J. H. McCurry, Fifty-Year Club Secretary, at the Hotel Marion prior to 6:00 P.M., Tuesday, April 23rd.

PAST PRESIDENTS' BREAKFAST

The Past Presidents of the Society will meet at breakfast at 7:30 A.M. in the Hotel Marion on Thursday, April 25th.

MEDICAL CENTER PARTY

A reception honoring the special guests of the Medical Center will be held at the Center on Wednesday. All members of the Medical Society and their wives are invited to attend.

DEDICATION OF UNIVERSITY OF ARKANSAS MEDICAL CENTER

The dedication will be held on the grounds of the new Medical Center beginning at 10:30 A.M. on Thursday, April 25th. All members and guests of the Arkansas Medical Society are invited to attend.

FLYING PHYSICIANS ASSOCIATION OF ARKANSAS

The Flying Physicians Association of Arkansas plans to hold a luncheon meeting during the convention. Date and place of meeting to be announced.

ARKANSAS OBSTETRICAL AND GYNECOLOGICAL SOCIETY

The Arkansas Obstetrical and Gynecological Society plans to hold a meeting in conjunction with the Annual Session. Two well-known speakers have been procured—the complete program will be announced at a later date.

ARKANSAS ORTHOPAEDIC SOCIETY

The Arkansas Orthopaedic Society will meet in Room B-114 at the Medical Center at 2:00 P.M., Monday April 22nd. The speaker will be Dr. John Cobb, Scoliosis Service, Cornell Medical Center, New York.

CONTINUOUS SHOWING OF SCIENTIFIC MOVIES

Scientific films from the library of the American College of Surgeons will be shown continuously from 8 to 5 on Monday and Tuesday and from 8 to 12 on Wednesday.

M.D. PHYSICAL EXAMINATION BOOTH

Dr. Randolph Ellis, in cooperation with the Arkansas Academy of General Practice, the Arkansas Heart Association, the Arkansas Trudeau Society, and the Arkansas State Board of Health, has arranged a booth offering a physical examination for every physician, including a 70 mm. photo chest X-ray and electrocardiogram. The booth will be located near the exit on the left side of the Exhibit Hall.

GOLF TOURNAMENT

All members are invited to enter the annual golf tournament to be held Sunday and Monday, April 21st and 22nd.

SKEET SHOOT

A Skeet Shoot will be held on Sunday, April 21st.

COMMERCIAL EXHIBITS

Robinson Auditorium, Tuesday Through Thursday

The Commercial Exhibits display the products and services of well known and reputable firms. Their presence here represents an important financial contribution to our annual session. You are urged to visit each booth and register with the representatives in attendance.

SCIENTIFIC EXHIBITS

A great many scientific exhibits have been arranged in the Robinson Auditorium in the Exhibit Hall with the Commercial exhibits. You will be interested in seeing these displays by Arkansas and out-of-state physicians.

FIRST GENERAL SESSION

Tuesday, April 23rd — 9:00 A.M.

Lecture Hall, Robinson Auditorium

Frank Kumpuris, Little Rock, Presiding

(The E.E.N.T. Group will meet all day, including luncheon, in the Coach Room, Hotel Marion.)

- 9:00 A.M. Call to Order.
Invocation—The Reverend Richard B. Hardie, Westover Hills Presbyterian Church, Little Rock.
- 9:10 A.M. President's Address—Fount Richardson, Fayetteville.
- 9:30 A.M. "Hoarseness, Diagnosis, and Treatment"—Joseph H. Ogura, Washington University School of Medicine, St. Louis, Mo.
- 9:55 A.M. "Ulcerogenic Cerebral Lesions and Pancreatic Tumors"—Hans G. Schlumberger, Department of Pathology, Ohio State University College of Medicine, Columbus, Ohio.
- 10:20 A.M. "Bladder Dysfunction in Children"—Harold McDonald, Atlanta, Georgia.
- 10:45 A.M. "The Management of Scoliosis"—John Cobb, Cornell Medical Center, New York City.
- 11:10 A.M. Nutrition—Tom Spies, Hillman Hospital, Birmingham, Ala.
- 12:00 Noon GENERAL SESSION LUNCHEON—Hotel Marion.
William B. Harrell, Texarkana, Presiding.

SECOND GENERAL SESSION

Tuesday, April 23rd

Lecture Hall, Robinson Auditorium

John Olson, Fort Smith, Presiding

- 1:00 P.M. Scientific Movies.
- 2:00 P.M. "Management of Eye Injuries by the General Surgeon"—William B. Clark, New Orleans.
- 2:25 P.M. "Contributions of the Anesthesiologist to the Medical Profession"—Steven J. Martin, St. Francis Hospital, Hartford, Connecticut.
- 2:50 P.M. Gynecology—R. Gordon Douglas, Cornell Medical Center, New York City.
- 3:15 P.M. General Surgery—Speaker to be announced.
- 3:40 P.M. Clinical Pathological Conference—Guests of the day.
Moderator—Hans Schlumberger, Little Rock.

SPECIAL SECTIONS PROGRAMS

Tuesday, April 23rd

Section on Eye, Ear, Nose and Throat—

- 9:00 A.M. Chairman's Address—William J. Schwarz, Little Rock.
“Scleral Buckling and the Surgical Management of Separation of the Retina”—William B. Clark, New Orleans.
Talk by Raymond Cook, Little Rock.
- 12:00 Noon LUNCHEON—PANEL DISCUSSION.
Talk by C. D. Cyphers, El Dorado.
“Present Status on Treatment on Carcinoma of the Larynx”—Joseph H. Ogura, St. Louis.

HOUSE OF DELEGATES

Tuesday Afternoon, April 23rd — 4:30 P.M.

Lecture Hall, Robinson Auditorium

Tuesday Night, April 23rd

- 6:00 - 8:00 P.M. THE LITTLE ROCK ACADEMY OF SURGERY will be Dutch Treat hosts to the Arkansas Medical Society at a refreshment hour from 6:00 to 7:00 in the Continental Room, with dinner from 7:00 to 8:00. Dr. Steven Martin will be the speaker at the dinner meeting.

Wednesday, April 24th

Commercial Exhibits Open 8:00 A.M. to 5:00 P.M.

Continuous Scientific Movies—8:00 A.M. to 5:00 P.M.

Specialty Section Meetings All Day in Hotel Marion.

The Arkansas Psychiatric Association will meet at Veterans' Administration Hospital, North Little Rock, beginning at 10:00 A.M.

THIRD GENERAL SESSION

Lecture Hall, Robinson Auditorium

John Wood, Mena, Presiding

- 9:00 A.M. Call to Order.
Invocation—The Reverend Michael Carroza, All Souls Church, Scott, Ark.
- 9:10 A.M. Julian Price, Member of Board of Trustees, American Medical Association.
- 9:20 A.M. World Medical Association—R. B. Robins, Camden, Arkansas.
- 9:30 A.M. “Indications and Contra-Indications in Use of Ultrasonics in Medicine”—John Aldes, Cedars of Lebanon Hospital, Los Angeles, California.
- 9:55 A.M. “The Present Day Treatment of Rheumatoid Arthritis”—J. J. Bunim, National Institute of Arthritis and Metabolic Diseases, Bethesda, Maryland.

ARKANSAS MEDICAL SOCIETY MEETING, APRIL 23-25, 1957

- 10:20 A.M. "The Problem of the Oversized Infant"—Robert Willson, Temple University Medical School, Philadelphia, Pennsylvania.
- 10:45 A.M. "Changing Concepts in Primary Tuberculosis"—Alex Steigman, Louisville General Hospital, Louisville, Ky.
- 11:10 A.M. "The Diagnosis and Management of Anemias"—Frank Bethel, University of Michigan School of Medicine, Ann Arbor.
- 11:35 A.M. "Pulmonary Hypertension"—H. B. Burchell, Mayo Clinic, Rochester, Minn.
- 12:00 Noon GENERAL SESSION LUNCHEON—Hotel Marion. Jerome S. Levy, Little Rock, Presiding.

FOURTH GENERAL SESSION

Wednesday, April 24th

Lecture Hall, Robinson Auditorium

Randolph Ellis, Malvern, Presiding

- 1:00 P.M. Scientific Motion Pictures.
- 2:00 P.M. "Hypnosis in Medicine and Surgery"—Seymour Hershman, Chicago, Illinois.
- 2:25 P.M. "Hypnosis in Obstetrics and Gynecology"—William S. Kroger, Chicago, Illinois.
- 2:50 P.M. "Critique of the Tranquillizing Agents"—Howard P. Rome, Mayo Clinic, Rochester, Minnesota.
- 3:15 P.M. "Urticarial Diseases in General Practice"—Stephen Rothman, Chicago Medical School, Chicago, Illinois.
- 3:40 P.M. Clinical Pathological Conference—Guests of the day. Moderator—Hans Schlumberger, Little Rock.

SPECIALTY SECTIONS PROGRAMS

Wednesday, April 24th

The Arkansas Dermatological Association—

- 9:30 A.M. The Arkansas Dermatological Association will hold its annual meeting in the Medicine Clinic at the University of Arkansas Medical Center at 9:30 A.M. on April 24, 1957. The program will consist of the presentation of a number of interesting dermatologic cases. While the program will be primarily of interest to dermatologists, it will include unusual cases and therapeutic problems which will be of interest to all physicians, especially general practitioners. All physicians are cordially invited to see these cases and are welcome to participate in the general discussion which will follow at 10:30 A.M. Dr. Stephen Rothman, Professor and Head of the Section of Dermatology, University of Chicago Clinics, will be a guest at this meeting and will discuss the cases presented. A Dutch treat luncheon will be served at the University.

ARKANSAS MEDICAL SOCIETY MEETING, APRIL 23-25, 1957

Section on Pediatrics—

- 10:00 A.M. GENERAL SESSION—Robinson Auditorium Lecture Hall.
“Changing Concepts in Primary Tuberculosis”—
Alex J. Steigman, Louisville, Ky.
- 12:30-2:00 LUNCHEON—Hotel Marion.
Question and Answer Forum on Tuberculosis.
Moderator—Ed Mathis, Little Rock.
- 2:00-4:00 Joint Pediatric and General Practitioner Symposium.
A. Respiratory Infections of the Infant and Child.
B. Newer Thoughts on Viral Infections of the Central
Nervous System
Discussants—Alex Steigman, Professor of Child Health, University of Louisville School of Medicine; Dr. Katharine Dodd, Professor of Pediatrics, University of Arkansas School of Medicine; and Charles Archer, General Practitioner, Conway, Arkansas.

Wednesday Night, April 24th

- 7:00 P.M. Dutch Treat Dinner—Academy of Medicine. Meeting is for all those interested in Internal Medicine, wives are invited. Speaker to be announced.
- 8:30 P.M. Banquet for Distinguished Guest—Sponsored by the University Medical Center.

Thursday, April 25th

Robinson Auditorium

Commercial and Scientific Exhibits open from 8:00 A.M. to 12:00 Noon.

Continuous Scientific Motion Pictures from 8:00 A.M. to 12:00 Noon.

The University of Arkansas Medical Center

- 8:00 A.M. Ward Rounds, Clinics, Surgical Demonstrations.
Members are invited to attend.
- 10:30 A.M. Convocation—Professional Dedication on the grounds of the New Medical Center. Dedicatory Address by Dr. Lewis Webster Jones, President of Rutgers University, New Brunswick, New Jersey.

LUNCH MAY BE OBTAINED IN THE MEDICAL CENTER CAFETERIA.

Thursday Afternoon, April 25th

1:30 P.M. Memorial Service—Fount Richardson, Fayetteville, President,
Presiding.

Invocation—Walter O'Neal, M.D., Little Rock.

Chorale—"Now Let All The Heavens Adore Thee"
From the Sacred Cantata, "Sleepers Wake," J. S. Bach
Medical School Mens' Chorus.

The Reading of the Names of the Deceased Members—
Fount Richardson.

In Memoriam—Carl E. Wenger, Little Rock.

Chorale—Motet from the Mass, "Christus e Miserere," Zin-
garelli. Medical School Men's Chorus.

Benediction—Walter O'Neal, M.D., Little Rock.

2:00 P.M. HOUSE OF DELEGATES—Medical Center Auditorium

Roll Call

Report of Nominating Committee

Election of Officers—

President-Elect

First Vice President

Second Vice President

Third Vice President

Treasurer

Secretary

Speaker of the House of Delegates

Vice-Speaker of the House of Delegates

Councilors from the First, Third, Fifth, Seventh and Ninth
Councilor Districts

Vice-Councilors from the First, Third, Fifth, Seventh and
Ninth Councilor Districts

Delegate to A.M.A. House of Delegates

Alternate Delegate to A.M.A. House of Delegates

Report of Reference Committees

Supplementary Report of Council

Report of Committees

New Business

Adjournment

FINAL GENERAL SESSION (Immediately following adjournment of
House of Delegates.)

Fount Richardson, Fayetteville, President, Presiding

Installation of New President

Presentation of President-Elect

Selection of time and place of next meeting

Adjournment

COUNCIL MEETING

The new Council will convene for a brief reorganization meeting im-
mediately following adjournment of Final General Session.

MEDICAL CENTER PROGRAM

2:30 P.M. **Symposium on Current Problems of Education in the Health Sciences—University of Arkansas Medical Center**

“Meeting the Future in Medical Education”—Ward Darley, Executive Director, Association of American Medical Colleges, Chicago, Illinois.

“Financing A University Medical Center”—Albert W. Snoke, President, American Hospital Association and Director, Grace-New Haven Community Hospital, New Haven, Conn.

“Recruitment of Scientific Manpower” — Howard L. Bevis, Chairman, National Committee for Development of Scientists and Engineers, National Science Foundation, Washington, D. C.

“Federal Support for Construction of Medical Facilities”—The Honorable Oren Harris, The House of Representatives, Washington, D. C.

SCIENTIFIC MEETINGS TO BE HELD IN CONJUNCTION WITH UNIVERSITY MEDICAL CENTER DEDICATION

APRIL 26 and 27—Southwestern Section of the Society for Experimental Biology and Medicine

APRIL 26 and 27—SOUTHWESTERN Section of the American Association for Cancer Research

Thursday—6:00 to 8:00 P.M.—Open for private parties.

Thursday Night, April 25th

ANNUAL STATE MEDICAL SOCIETY PARTY

Ballroom, Hotel Marion

Sandwiches — Soft Drinks — Dance

SCIENTIFIC EXHIBITS TO BE SHOWN AT THE ROBINSON AUDITORIUM DURING OUR COMING ANNUAL SESSION:

“Plastic Surgery As Seen in General Practice”.....McCarthy DeMere, M.D., Memphis, Tenn.

“Techniques of Radical Mastectomy”.....W. G. Cooper, Jr., M. D. Little Rock

“Strictures of the Common Duct’ Etiology, Prevention and Surgical Therapy”.....Harwell Wilson, M.D., E. H. Storer, M.D., and E. E. Branlitt, M. D. of the Department of Surgery, University of Tennessee School of Medicine

“Diagnosis of Cervical Malignancy by Means of Vaginal Cytology”.....C. Gordon Johnson, M.D., Browne-McHardy Clinic, New Orleans

“Surgical Diseases of the Adrenal Glands”.....James W. Headstream, M.D., Little Rock

“A Study of Serum Lipoproteins by Electrophoresis”.....Radiosotope Service, V.A. Hospital, Little Rock

- "Thyroid Scanning As An Aid in Diagnosing
Thyroid Disease"..... Radiosotope Service, V.A. Hospital, Little Rock
- "Urologic Pathology Mimicking Intra-Abdominal
Conditions"..... Morton C. Wilson, Holt-Krock Clinic, Fort Smith
- "Demonstration of Plaster Techniques and
Traction Apparatus"..... F. Dixon Conlin, M.D., University of Arkansas
School of Medicine, Little Rock
- "Plastic and Reconstructive Surgery"..... James G. Stuckey, M.D., Little Rock
- "Pelvic Pneumography"..... James W. Buice, M.D., and David M. Gould, M.D.,
University of Arkansas School of Medicine, Little Rock
- "Bronchography"..... Fred J. Gray, M.D., and James Morrison, M.D.,
Little Rock
- "Results Achieved by Surgery at the
State Tuberculosis Sanatorium"..... State Sanatorium, Booneville Ark.
- "Careers in X-Ray Technology"—
University of Arkansas School of X-Ray Technology
- "A Visible Tumor Clinic"—
Calvin J. Dillaha, M.D., and G. Thomas Jansen, M.D.,
Section of Dermatology, Department of Medicine,
University of Arkansas School of Medicine, Little Rock

Arkansas Heart Association

Arkansas Physical Therapy Association

Student Loan Fund, University of Arkansas Medical Alumni

COMMERCIAL EXHIBITS

The business firms who purchase exhibit spaces at our annual session contribute a great deal to the financing as well as to the educational aspects of the meeting. The number of visits to the commercial exhibits are the only criteria by which these companies can judge the value they receive from their investment in booth rental, displays and employees' time. You will be rewarded for the time you spend visiting the following exhibits:

KELEKET X-RAY COMPANY OF ARKANSAS

Keleket's booth will feature our new 1957 Coronet I X-Ray equipment. This will be a 100 M.A. at 100 P.K.V. Keleket X-Ray, fully automatic with dependable full tube protection, preventing errors in setting time — MA or KV — which may damage tube. It will include a 1/30 sec. electronic timer, stabilizer, motor-driven tilt table, with 60 line, 1/10 sec. recipromatic bucky. A spot film tunnel, 5 in 1, is available with the two-tube 100 M.A. unit. A Dynamax "20" .8, 1.8 rotating anode radiographic tube is furnished.

CENTRAL SURGICAL COMPANY

Central Surgical Company will feature its new 1957 Model Castle 999, Autoclave, which sterilizes in 17 minutes from a cold start. It has many new features, including increased capacity, with two trays of 8 $\frac{1}{4}$ "x14 $\frac{3}{4}$ " and 5 $\frac{5}{8}$ "x14 $\frac{3}{4}$ " inside net. The 9"x16" chamber is ideal for dressings, syringes, gloves, packs, flasks, jars, and the very biggest instruments. Everything fits with room to spare. It has two-way safety, simplicity, speed and convenience, and is designed with styles in green, coral and silvertone colors.

SMITH, KLINE AND FRENCH LABORATORIES

You are cordially invited to visit the SKF booth. This year we are featuring 3 new compounds — "Compazine," "Sul-Spansion," and "Ecotrin," each one of which displays a unique therapeutic advantage. Featured also are "Cytomel" and "Thorazine." Our representatives will be most willing to give you more complete literature and information.

PEACOCK SURGICAL COMPANY

Our exhibit will consist of instruments and equipment of general interest to the profession, featuring the new Liebel-Flarsheim BasalMeter, a direct reading Basal Metabolism machine.

THE DICK X-RAY COMPANY

The Dick X-Ray Company plans to show two different types of operating Room Cardioscopes, which are creating quite a bit of interest among the physicians and surgeons of the country. Also, on exhibit will be the Cambridge Direct Wiring Electrocardiograph, the Dallons Ultra Sonic Unit and some new and interesting X-Ray accessories.

SANDOZ PHARMACEUTICALS, Division of Sandoz Chemical Works, Inc.

Sandoz Pharmaceuticals cordially invites you to visit our display at Booth Number 7.

CAFERGOT PB — The most effective oral medication for the relief of migraine headache with G.I. disturbance accompanied by tension.

BELLERGAL S T — Assures around the clock control of functional complaints (example—menopause symptoms) in the periphery where they originate.

SANDOSTENE — An antihistaminic with powerful anti-permeability action useful in the treatment of itching, asthma, etc.

Any of our representatives in attendance will gladly answer questions about these and other Sandoz products.

AMERICAN FERMENT COMPANY

Stop at the booth for your personal supply of Falgos, the buffered compound analgesic that acts quickly and without gastric upset. Let us also explain the advantages of Caroid and Bile Salts Tablets, Alcaroid Antacid, and Supligol, the whole bile-ketocholanic acid compound.

BELTONE HEARING SERVICE

We, of Beltone, cordially invite you to visit our booth, our new 15 A Clinical Audiometer, now in use in many of the universities and Veterans Hospital, will be on display. Note, also, the Hearing Aid advancement from the oldest to the now famous Hear-N-See models in glasses. We will gladly demonstrate any of our products.

DOHO CHEMICAL CORPORATION

AURALGAN — Ear medication in Otitis Media and removal of Cerumen;

OTOSMOSAN — Effective, nontoxic Fungicidal and Bactericidal (gram negative-gram positive) in the suppurative and aural dermatomycotic ears;

RHINALGAN — Nasal decongestant free from systemic or circulatory effect and equally safe to use on infants as well as the aged.

NEW LARYLGAN — Soothing throat spray and gargle for infectious and non-infectious sore throat involvements.

EATON LABORATORIES

Published reports show that Furadantin^(R) is one of the most effective and rapidly acting agents available at this time for the treatment of prostatitis and acute and chronic urinary tract infections.

Furadantin has specific affinity for the urinary tract, producing antibacterial concentration in 30 minutes. Time-consuming trial and error with less effective agents is eliminated.

WM. T. STOVER COMPANY, INC.

Bill Stover and his experienced specialists — Joe Fetzek, Lamar Massie, Clyde Love, Ray Boedeker, and Don Robertson — will assist you and demonstrate top quality medical and surgical goods.

(Sorry no coffee and donuts this year — per the Society's request.)

For the latest **AUTOMATIC** X-ray equipment by Picker, a brand name manufacturer, and bearing the Picker nameplate request a demonstration by Bob Deglow, Basil Holmes, or John Solinger.

E. R. SQUIBB AND SONS

E. R. Squibb and Sons has long been a leader in development of new therapeutic agents for prevention and treatment of disease. The results of our diligent research are available to the Medical Profession in new products or improvements in products already marketed.

At Booth No. 15, we are pleased to present up-to-date information on these advances for your consideration.

RATHER AND BEYER

The exhibit of Rather and Beyer will have information available for all types of insurance necessary for the professional man. Particular emphasis will be given to the Group Plans of Disability Insurance protecting loss of income and re-imbursing business expense while totally disabled, which have **OFFICIAL ENDORSEMENT** of the Society.

ORGANON, INC.

Physicians are cordially invited to visit the Organon booth where will be presented well-known specialties. Included among these will be Cortrophin-Zinc, the long-acting aqueous ACTH; Wigraine, the rapid-acting migraine therapy; Vistabolic, the new gerontotherapeutic aid; Trevidal, the protective, balanced antacid; Pernaemon, the painless liver injection; and Liquaemin, American's first and purest heparin. Samples and literature will be available, and Organon representatives will be happy to discuss these advances in therapy with all interested physicians.

WINTHROP LABORATORIES

LEVOPHED: The true vasoconstrictor hormone of the Adrenal Medulla, for the maintenance of blood pressure in shock and other acute hypotensive states.

ELI LILLY AND COMPANY

You are cordially invited to visit the Lilly exhibit located in space number 21. The display will contain information on recent therapeutic developments. Lilly sales people will be in attendance. They welcome your questions about Lilly products.

MEDCO PRODUCTS COMPANY

Presenting the MEDCO-SONLATOR. Providing a new concept in therapy by combining muscle stimulation and ultra-sound simultaneously through a SINGLE Three-Way Applicator.

The MEDCO-SONLATOR is a distinct advance in the effectiveness of physical therapy in your office or hospital. A few minutes spent in our booth should prove of value to your practice.

THE WILLIAM S. MERRELL COMPANY

Merrell representatives will be on hand to discuss TACE, a new distinctive estrogen and Meratran, a new unique antidepressant.

Please stop at our booth, they will be happy to talk with you.

THE HEALTH INSURANCE COUNCIL OF AMERICA

The Health Insurance Council's exhibit is designed to provide general information on health insurance as underwritten by insurance companies. In addition, it also makes available information on uniform claims forms for use by doctors and hospitals as support of health insurance claims.

J. A. MAJORS COMPANY

W. B. Saunders publications will be on display for your examination and perusal. A few of the more recent books will be: Campbel-Yrology; Nadas-Pediatric Cardiology; Tracy—The Doctor As A Witness; Zimmerman-Surgical Physiology; New 23rd Edition of Dorland's Medical Dictionary; and Cecil-Specialties in General Practice.

AYERST LABORATORIES

Physicians are invited to visit Booth 28 where Ayerst representatives will be on hand to welcome them and discuss any Ayerst specialties of interest to them.

G. D. SEARLE AND COMPANY

You are cordially invited to visit the Searle booth where our representatives will be happy to answer any questions regarding Searle Products of Research.

Features will be Nilevar, the new anabolic agent; Rolicton, the new safe, non-mercurial oral diuretic; Vallestiril, the new synthetic estrogen with extremely low incidence of side reactions; Banthine and Pro-Banthine, the standards in anti-cholinergic therapy; and Dramamine, for the prevention and treatment of motion sickness and other nauseas.

MERCK SHARP AND DOHME, Division of Merck and Company, Inc.

The Merck Sharp and Dohme exhibit presents highlights on steroid therapy featuring the newer adrenal cortical steroid preparations in endocrine disorders, collagen diseases, respiratory allergies, eye diseases and skin conditions.

Research developments in the field of antibacterial agents are of clinical significance. Expertly trained personnel will be pleased to discuss advanced clinical reports on a new therapeutic agent which may be described as a "mood stabilizer."

CENTRAL PHARMACAL COMPANY

The Central exhibit will feature NEOLAX for physiologic treatment of chronic constipation; URITRAL, a highly effective urinary antiseptic and analgesic; and the NEOCYLATE FAMILY of potentiated salicylate products. Literature and samples of these specialties will be available.

JULIUS SCHMID, INC.

An interesting and informative exhibit featuring RAMSES Flexible Cushioned diaphragm; RAMSES Vaginal Jelly; VAGISEC Jelly and Liquid; two new products embodying "Carlendacide", the recent development of Carl Henry Davis, M.D., and C. G. Grand for vaginal trichomoniasis therapy; and XXXX (FOUREX) Skin Condoms, RAMSES and SHEIK Rubber condoms for the control of trichomonal re-infection.

A. H. ROBINS COMPANY, INC.

The A. H. Robins Company exhibit spotlights DONNATAL. This "most prescribed" of all antispasmodic-sedatives is available not only in tablets, capsules and palatable Elixir, but also in long acting Extentabs. Also featured: Allbee with C, capsules, providing "saturation dosage" of B complex factors and ascorbic acid; DONNAGESIC EXTENTABS, extended action tablets of codeine with Donnatal for 10-12-hour analgesic effects on a single dose; ENTOZYME, comprehensive digestive enzyme supplement; and ROBALATE (dihydroxy aluminum aminoacetate), antacid available in tablets and the new, light-bodied ROBALATE LIQUID.

HERBERT COX CORRECT SHOES, INC.

The relevance of correct shoes for patients in varied medical fields will be demonstrated by the exhibit of Herbert Cox Shoes, Little Rock.

Beyond orthopedic contingencies, fields as varied as pediatrics, geriatrics, obstetrics, and vascular surgery make use of the firm's strictly ethical service of verified competence.

FEDERAL FINANCIAL RECOVERY SERVICE

Doctor: We are in a position to help you. We can recover your delinquent accounts through our copyrighted recovery system at a net cost of 10%. Our operation is nation-wide and we operate on a membership plan having all money paid direct to you.

J. B. ROERIG AND COMPANY

J. B. Roerig and Company, Booth 36, will feature ATARAX, the new "Peace of Mind" drug. It's an all new chemical and is specially indicated for the "more normal" person, to bring relief from the common everyday tensions and anxieties. Co-featured with ATARAX will be BONADOXIN, the anti-emetic for relief of the nausea and vomiting of pregnancy; also effective in postanesthetic nausea, Meniere's Syndrome and postradiation sickness. Literature and samples available to physicians at the booth which you and your friends are cordially invited to visit.

THE COCA-COLA COMPANY

Ice cold Coca-Cola served through the courtesy and cooperation of Coca-Cola Bottling Company of Arkansas, Little Rock, Arkansas, and the Coca-Cola Company.

V. MUELLER AND COMPANY

Many V. Mueller instruments will be on display. Doctors will be most welcome to browse through our booth for a firsthand inspection. Instruments for use in the newer operating techniques will be featured.

ARKANSAS MEDICAL AND HOSPITAL SERVICE, INC.

ENDO LABORATORIES, INC.

Percodan^(R) tablets, the analgesic which provides faster and longer lasting relief from pain than codeine plus APC, will be featured at the Endo Booth. The average adult dose of one Percodan tablet usually relieves pain within 10 to 15 minutes and lasts up to 6 hours. Also featured will be Hycodan^(R), the antitussive recommended wherever cough therapy is indicated and Vifort^(R) drops, the completely water-soluble polyvitamin in small particle size.

THE S. E. MASSENGILL COMPANY

The S. E. Massengill Company extends its wishes for a most successful meeting and invites the convention to visit its booth and discuss Massengill Pharmaceutical products. The S. E. Massengill Company will feature Adrenosem Salicylate (the unique systemic hemostat), Homagenets (The only homogenized vitamins in a solid form), Salcort (A safe effective anti-arthritic) and Massengill Powder.

ABBOTT LABORATORIES

The new sedative, tranquilizer and antihypertensive, NEMBU-SERPIN (R) FILMTABS (R) will be among new products exhibited by Abbott Laboratories. Also shown will be the new non-barbiturate hypnotic, PLACIDYL (R) ; DESBUTAL (R) ; ERYTHROCIN (R) Filmtabs; IBEROL (R) Filmtabs; OPTILETS (R) Filmtabs; VI-DAYLIN (R) ; SELSUN (R) ; PENTOTHAL (R) SODIUM; and Abbott's complete line of intravenous solutions and equipment.

PARKE, DAVIS AND COMPANY

Medical service members of our staff will be in attendance at our exhibit for consultation and discussion of various products. Important specialties, such as Penicillin, S-R, Benadryl, Ambodryl, Dilantin Suspension, Vitamins, Eldec, Oxytel, Milontin, Amphetase, Chloromycetin, Thrombin Topical, etc., will be featured. You are cordially invited to visit our exhibit.

GENERAL ELECTRIC COMPANY, X-RAY DEPARTMENT

General Electric X-Ray will show their direct writing electrocardiograph with line stabilization. They will also feature a new line of interval timers, both mechanical and electric. New design features moulded cases that are resistant to water and chemicals. The display will be blond oak illuminated by fluorescent lighting.

KAY SURGICAL, INC.

The Coleman Flame Photometer and Spectrophotometer will be demonstrated throughout the forthcoming Arkansas Medical Society meeting. We will have attendants at the booth, experienced laboratory technicians to explain the flame photometer and it can be seen in use.

You are invited to visit our booth for demonstration. Looking forward to seeing you and having you visit our booth.

MEAD JOHNSON AND COMPANY

In the Mead Johnson booth, specially trained representatives will be ready to tell you about these product "families":


1. The Mead Johnson Formula Products Family—including ready-to-use Lactum and Olac for routine infant feeding, as well as Dextri-Maltose.
2. The Deca Vitamin Family—3 convenient dosage forms for comprehensive vitamin protection of infants and children.
3. The Colace Family—providing a new approach in preventing and treating constipation by keeping stools soft for easy passage.

PFIZER LABORATORIES

The Pfizer exhibit spotlights its recent and original therapeutic concepts represented by Bonamine, Tyzine, Toclase, Cortril, STERANE and MODERIL, Pfizer's new alkaloid of rauwalfia. Special features, however, are SIGMAMYCIN, a combination of Matromycin and Tetracycline; and the newest advance in topical corticosteroid therapy, Magnacort, the first water soluble corticoid.

ANNOUNCING

CATHO



more effective
in clinical
important infection
than any other
antibiotic

FOR MOST INFECTIONS

CATHOCILLIN



(NOVOBIOCIN-PENICILLIN G, MERCK)

THE ANTIBIOTIC PRODUCT
MOST LIKELY TO BE EFFECTIVE

COMPARE THESE ADVANTAGES:

Proved effectiveness in the largest number of clinically important infections including those caused by antibiotic-resistant *Staphylococci* and *Proteus*.

Therapeutic, *bactericidal* blood levels are promptly achieved.

Exceptionally well tolerated; patient sensitivity reactions are rare at recommended dose.

No yeast or fungal super-infections nor antibiotic-induced enteritis, vaginitis or colitis have been reported following CATHOCILLIN.

No problems of cross-resistance have been encountered with CATHOCILLIN.

The normal intestinal flora is not disturbed by CATHOCILLIN.

DOSE: for adults—two capsules q.i.d.; for children under 100 lbs.—dosage in proportion to weight (e.g. one capsule q.i.d. for a child weighing 50 lbs.).

CONSIDER CATHOCILLIN FIRST

—for these clinically important infections: tonsillitis; pharyngitis; pneumonia; otitis media; cervical lymphadenitis; streptococcal sore throat; infected tooth sockets; Vincent's infection; acne and superficial skin infections; impetigo; boils, furuncles and carbuncles; lung abscess; bronchitis; mastitis; osteomyelitis; wound infections; postoperative wound infections and infected lacerations; staphylococcal enteritis, staphylococcal diarrhea of the newborn; peritonitis (caused by susceptible organisms); pelvic inflammatory disease; gonorrhea; gonococcal arthritis; urethritis; scarlet fever; erysipelas.

SUPPLIED: Blue and white capsules of 'CATHOCILLIN'—each containing 125 mg. of 'CATHOMYCIN' (as Sodium Novobiocin, Merck) and 75 mg. (125,000 units) Potassium Penicillin G; bottles of 16.

In one prescription the one antibiotic product most likely to be effective



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Amendments to The Constitution Of The Arkansas Medical Society

The following amendments to the Constitution of the Arkansas Medical Society, having been read and approved at the 1956 Annual Session, will be considered for final passage by the House of Delegates during the 81st Annual Session:

(1) By-Laws (establishing standing committee on insurance)

CHAPTER 8, Section 1 (a) (Section on Standing Committees)—Add as Committee Number Ten: Committee on Insurance.

CHAPTER 8, Section 1 (a) (Section on Standing Committees)—Delete from Committee Number Five: The Sub-Committee "Blue Cross" so that it shall read: Chapter 8, Section 1 (a) 5. Committee on Hospitals (Hospital Liaison and Arkansas Hospital Association).

CHAPTER 8, Section 10 (Committee on Arrangements)—Change to: Section 11 (Committee on Arrangements).

CHAPTER 8—Add as Section 10: The Committee on Insurance shall deal with all matters pertaining to insurance, including Liaison with Blue Cross-Blue Shield.

(2) (Selecting annual meeting place two years in advance)

ARTICLE VIII, Section 2 (Constitution)—Add at end of first sentence "two years in advance."

CHAPTER 11, Section 1 (By-Laws)—Delete "preceding" from first sentence and add at end of sentence "two years in advance."

With these changes the sections would read as follows:

ARTICLE VIII, Section 2 (Constitution)—The place for holding each annual session shall be decided by the House of Delegates two years in advance. After conferring with the President and Secretary of the Society, the time for holding each Annual Session shall be decided by the Committee on Arrangements of the component society of the county in which the meeting is to be held.

CHAPTER 11, Section 1 (By-Laws)—The Society shall hold an annual session at such place as has been fixed by the House of Delegates at the annual session two years in advance.

ANNUAL COMMITTEE REPORTS

REPORT OF COMMITTEE ON PUBLIC HEALTH

BEN N. SALTZMAN, Chairman

The Committee on Public Health is composed of the following: Sub-Committee on Rural Health, Sub-Committee on Maternal and Child Welfare, Sub-Committee on Industrial Health, Sub-Committee on Tuberculosis, Sub-Committee on Mental Health, Sub-Committee on Liaison with the State Board of Health, and Polio Advisory Sub-Committee.

As has been customary in the past the reports of the various committees on Public Health will be submitted by the sub-committee chairmen. These reports will follow.

REPORT OF THE SUB-COMMITTEE ON RURAL HEALTH

BEN N. SALTZMAN, Chairman

The Sub-Committee on Rural Health is composed of the following members: Duane Brothers, John T. Herron, Willard Pruitt, A. H. Maddox, William Snodgrass and Ben N. Saltzman, Chairman.

The Rural Health Sub-Committee has not been active as such to date. However, several committee meetings in conjunction with the Advisory Committee have been held, formulating plans for a 6th Rural Health Conference. This Arkansas Rural Health Conference will be held March 20 and 21, at the University of Arkansas Medical Center. It promises to be one of the best conferences to date. Its subject matter will embody the cost of medical care and hospitalization. It will contain reference to medical education in conjunction with the cost of medical care. A large attendance is expected inasmuch as civic leaders all over the state will be asked to attend.

Our Advisory Committee this year consists of Dr. Fount Richardson, President, Arkansas Medical Society; Dr. Bryant Pake, Arkansas Dental Society; Dr. William L. Cloud, Arkansas Dental Society; Mrs. Hazel Jordan, State Agent, Home Demonstration Clubs; Miss Helen Robinson, Agricultural Extension Service; Austin Vines, Agricultural Extension Service; Aubrey Gates, Executive Director, Council on Rural Health, American Medical Association; Dr. Charles Henry, Member, Council on Rural Health, American Medical Association; Mrs. Mason G. Lawson, Arkansas Medical Society Auxiliary; Mrs. R. B. Maxwell, Arkansas Council of Home Demonstration Clubs; and Mrs. William Wilkie, Farm Bureau, Woman's Committee.

Arkansas Blue Cross-Blue Shield personnel are furnishing a great deal of help in providing publicity and general information concerning this conference.

A supplementary report will be prepared for the State Medical Meeting which will incorporate the program and the results of the conference. The chairman of this committee has been busy this year speaking over the state concerning the rural health

program in Arkansas. He has spoken to several county medical societies, Home Demonstration groups and to a group of hospital administrators. In general, the work of our committee is becoming fairly well known over the state.

It is the opinion of our group that the Committee is performing a worthwhile function, both for the medical society and for the people of Arkansas.

REPORT OF SUB-COMMITTEE ON MATERNAL AND CHILD WELFARE

FRANCES ROTHERT, Chairman

The committee has continued activities in school health in cooperation with the Joint Committee on Health Education of the Departments of Health and of Education; in the care of newborn infants in cooperation with the Academy of Pediatrics and in maternal mortality studies in cooperation with the Arkansas Obstetrics Society. It participated in the formulation of, and approved the plan of the Maternal and Child Health Division of the Arkansas State Board of Health for the Arkansas Child Development Center, an appraisal center for children thought to be mentally retarded.

REPORT OF THE SUB-COMMITTEE ON INDUSTRIAL HEALTH

H. E. MOBLEY, Chairman

There has been no activity by the Sub-Committee on Industrial Health during the past year.

REPORT OF THE SUB-COMMITTEE ON TUBERCULOSIS

JEROME S. LEVY, Chairman

In accordance with the program outlined in the report of this Committee at the last annual meeting, two sub-committees have been established to work with the State Sanatorium at Booneville and McRae Sanatorium, respectively. Dr. Harley C. Darnall of Fort Smith is chairman of the Committee to work with Dr. Rodkey and Mr. Lipscomb at Booneville with Dr. Duane Brothers of Ozark as his other committee member. Dr. Fred Gray, Chairman, with Dr. Harvey Shipp, both of Little Rock, compose the committee to work with Dr. Hugh Browne at McRae Sanatorium. These committees do not have a report at this time.

Your committee on Tuberculosis does not have any additional report at this time.

REPORT OF THE SUB-COMMITTEE ON LIAISON WITH THE STATE BOARD OF HEALTH

JOHN T. HERRON, Chairman

No matters have been brought before the Committee on Liaison with the State Board of Health during the past year, and because of this reason this committee has no report on activities to make.

REPORT OF POLIO ADVISORY SUB-COMMITTEE

EUGENE H. CRAWLEY, Chairman

During the early part of this year this committee participated in the State Polio Vaccine Committee in promoting the Federal Vaccine Program. This was met by varied success over the state and about 35% of the eligible children in the state received one or more of the injections on this program. This did not include the number receiving the vaccine in the physicians' offices. On various occasions during the year the chairman acted as consultant representing the committee and society in council with the N.F.I.P. or on the state vaccine committee.

January 26th the Chairman of the Committee represented the Arkansas Medical Society in a called meeting of the A.M.A. in Chicago to promote a public service Salk Vaccine Program to vaccinate all persons under 40 and anyone else desiring it as a medical public service. A plan was formulated adapted along the lines suggested by the A.M.A. and was accepted by the council of the Arkansas Medical Society; this program is included in this report with results to be amended at a later date.

A.M.A. POLIO ERADICATION PROGRAM

The A.M.A. Board of Trustees on December 14, 1956, adopted the following motion:

"The A.M.A. is in favor of encouraging the administration of poliomyelitis vaccine to the public, and is in sympathy with the efforts of those who are endeavoring to educate the public in its use. The A.M.A. will lend its effort, through regular medical channels toward the encouragement of such use by the general public."

The following consensus was reached on the current status of the polio vaccine program:

1. The poliomyelitis vaccine is both safe and effective.
2. That everyone should be encouraged to be vaccinated, particularly those under 40 years of age.
3. That inertia and apathy were primarily responsible for the failure of large segments of the public to be vaccinated.
4. That the medical profession should *go all out* in an effort to promote the use of the vaccine.
5. The medical organization should assume the leadership in such a campaign.
6. The American Medical Association, together with its constituent state and territorial associations, should spearhead this campaign.

In adapting this resolution to Arkansas the following additional recommendations and policies are to be considered for approval:

- (1) A deadline of March 1st to be set.
- (2) Every means available in the communities be utilized to educate and promote the vac-

cination of all individuals up to age 40, regardless of ability to pay.

- (3) A committee headed by a physician shall be formed by each County Medical Society to assume the leadership and direction of the program. Every effort is to be made to promote a local medical public service to the community, contacting local health units and other interested agencies, groups and media and establishing concrete policies and plans.
- (4) Select workers and interested members for committees and give them all a job.
- (5) Develop a campaign to reach all segments of the population (teen-agers, young adults, children, churches, clubs, P.T.A., etc.).
- (6) Make the physician's office the clearing point for all information and medical procedure where possible, utilizing local drugs outlet and local distributors.
- (7) Encourage industry and businesses to make the vaccine available to employees and their families at cost or a reduced fee, working through the local physicians and health agencies.
- (8) Physicians make the vaccine available at a cost plus nominal reduced fee, during the campaign.
- (9) Encourage hospitals, colleges, and other groups to request and require vaccination. Especially, hospitals and nursing schools should require all their personnel to take the vaccine from their own physician or from sources made available by the hospital or school.
- (10) In order to evaluate this campaign and its progress, it should be coordinated and followed by a state committee, who would act as consultants and collect the records of injections, supply information on available materials, and act as a clearing house for the local county organizations.
- (11) Special efforts should be given to vaccinating the medically indigent and every local committee should include this in their plans.
- (12) All counties be allowed to revise their plans on the Medical Vaccine Program (Public Law No. 377, 84th Congress), or (Poliomyelitis Vaccination Assistance Act) in order that the vaccine can be given in the physician's office as is done with gamma globulin, or in the public health clinics according to the desires of the individual and as long as the law is obeyed.

REPORT OF COMMITTEE ON MEDICAL EDUCATION

H. W. THOMAS, Chairman

The Committee on Medical Education has held only one meeting this year. This was a joint meeting with the Legislative Committee and members of the Pulaski County Liaison Committee, Dr. Lawrason, Provost of the Medical Center and Mr. Nelson Evans, Administrator of the University

Hospital. This meeting was held at the Albert Pike Hotel on Sunday, January 20, 1957.

A lengthy and detailed discussion of various factors contributing to the absence of the previous close harmony between this Committee and the Administration of the Medical Center was held. This discussion was quite frank and it was the conclusion of this Committee that the Medical Center, its legitimate needs, its program, and its goal of educating Arkansans to give medical care to the people of Arkansas far transcends any individual or group prejudice.

It was pointed out that there has been poor liaison between the Medical Center and a large segment of the medical profession of Arkansas. Recommendations to correct this were made and progress is being made toward this end.

It is the feeling of this committee and the Administration of the Medical Center that the coming year will be much more productive than the past.

We wish to call attention to the fact that a good start has been made on a General Practice Residency Program at the Medical Center. We further wish to re-emphasize the previously enunciated position that the primary mission of the University of Arkansas School of Medicine is to train doctors, primarily General Practitioners, to practice in Arkansas.

REPORT OF COMMITTEE ON HOSPITALS

GUY SHRIGLEY, Chairman

No business has been presented to this committee, and no formal action has been taken.

The committee has continued to study the physician-hospital relationship relative to anesthesiology, pathology and radiology which has been appealed to the Supreme Court in Iowa, and have been advised that a Joint Declaration has been ratified by the policy making bodies of both the Iowa State Medical Society and the Iowa Hospital Association, which should provide an amicable solution to this controversy. The appeal to the Supreme Court is at this time still pending, but it is our understanding that such will be dismissed as soon as final arrangements for implementing the Joint Declaration have been completed. It is felt that the final decision and outcome in Iowa can be adapted to the needs of our state in this matter.

REPORT OF SUB-COMMITTEE ON LIAISON WITH BLUE CROSS-BLUE SHIELD

SAM JAMESON, Chairman

Since the last published report of activities by the Liaison Committee with Blue Cross-Blue Shield, published in the March, 1956, Journal of the Arkansas Medical Society, this committee has had one meeting on April 23, 1956, at the Marion Hotel, Little Rock. Liaison Committee members present: Drs. R. C. Dickinson, A. S. Koenig, Gerald Teasley, Ellery Gay and Sam G. Jameson. Guests were: Dr. Charles Henry, Mr. Waldo Frasier, Executive Director of the Arkansas Farm Bureau

Federation and a member of the Board of Trustees of Arkansas Blue Cross-Blue Shield, Mr. Peter Diesch, Attorney for the Arkansas Medical Society, and Mr. Perry Whitmore, representative of the Insurance Commissioner of the State of Arkansas. Blue Cross-Blue Shield representatives present: Messrs. John Rowland, Al Ercolano, Rick Campbell, Gene Lopez, and Joel Anderson.

Subjects of discussion were as follows:

- I. Increased Blue Cross-Blue Shield benefits which were effective April 1, 1956. These benefits include the following:
 - A. Number of days of coverage increased from 30-70 to 70-120.
 - B. Waiver of all pre-existing conditions after one year of membership.
 - C. Coverage of infants from birth instead of from age 90 days.
 - D. Payment for medical visits in hospital with greater number of contracts.
 - E. Provision of 30 days care for nervous and mental conditions and tuberculosis, all formerly limited to maximum of 14 days.
 - F. Broadening of regulations allowing smaller groups to have comprehensive coverage or deductible comprehensive coverage.
 - G. Reduction of maternity waiting period from 10 months to 9 months.

II. Participating Physician Contract.

The Participating Physician Contract was discussed at length, and it was the unanimous opinion of the committee that all licensed physicians in Arkansas, especially those who are members of the Arkansas Medical Society, should become participating physicians because of the following reasons:

Historically, members of the medical profession have been dedicated to the idea of community service. Blue Shield in itself and its counterpart for hospital service, Blue Cross, were conceived on that principle and have as their primary objective the betterment of the community through provision of the broadest possible health service benefits to the greatest number of people at the least possible cost.

Ten years ago Arkansas had no Blue Shield Plan, the only one of the 48 States which had failed to provide a comprehensive service program to relieve its people from the catastrophic effects of unexpected and undeterminable expenses of medical and hospital care. A representative group of members of the Arkansas Medical Society from all sections of the State, working zealously together with like representatives of Arkansas hospitals and leading civic-minded laymen, developed and launched Arkansas' first state-wide prepayment program. Whatever degree of success this program has attained is due in great measure to the support which has been given it by the medical profession. The ultimate limits to which it can be developed are prescribed only by the degree of en-

thusiastic support which is continued to be afforded by the members of the profession.

As a creation of the Arkansas Medical Society and as a sponsored agency of our State organization, Blue Shield and its accomplishments to date warrant the enthusiastic cooperation of all Arkansas physicians. Assurance that doctors themselves have a direct voice in shaping the policies of the program and can express the wishes of the profession in determining scope of benefits and pattern of coverage is provided in the very structure of the Plan. Six members of its policy-making group, the Board of Trustees, are representatives of the Arkansas Medical Society. That these medical society members shall be truly representative of the interests of the Society is guaranteed through a democratic method of selection. Each year our House of Delegates through its own processes nominates and elects a physician of its choice for a six-year term of service on the Board. The other 12 members are composed equally of hospital people and outstanding civic individuals who are conscious of the needs and wishes of the general public.

On the practical side of this question, it should be stated that last year Blue Cross-Blue Shield had an income of approximately \$5,000,000, of which 80 percent was returned for medical, surgical, and hospital services protection for over two hundred thousand citizens of Arkansas. Of the remaining 20 percent income, approximately 12-14 percent was used to pay all operating expenses, with the remaining 6-8 percent used to establish a reserve which obviously is necessary for any type service insurance organization.

Because Blue Cross-Blue Shield is a product of the Arkansas Medical Society, it was concurred in by the committee that members of the Arkansas Medical Society should agree to an adjustment of payment for a ninety-day period in the event of financial difficulty. It should be stressed, *emphatically*, that there is no anticipation whatsoever of any financial difficulty, but since Blue Cross-Blue Shield is a nonprofit organization and operates with a fixed limit of reserves, it is possible that in the event of a major disaster in an area where there are many Blue Cross-Blue Shield subscribers, a temporary period could exist whereby it would be necessary for participating physicians to wait upon payment up to a period of ninety days. Since each member of the Arkansas Medical Society has a direct interest in Blue Cross-Blue Shield, it is only logical, therefore, that such a participating physician's contract be signed to protect our individual interest in this organization.

Last, and probably as important as any other reason, the fact that each of us is a participating physician voices our sincerity in assuring the people of Arkansas that we are genuinely interested in their economic welfare as well as their standards of health. It assures them that when they subscribe to Blue Cross-Blue Shield, we, the physicians who founded this organization, will back it by agreeing to see to it that services are rendered as agreed upon in the contract, even though it might be conceivable, although unlikely, that there would ever be a period up to ninety days in which we would wait on our payment for services. In no

way does it stipulate the fee which any individual charges, but it only states that that portion which Blue Shield will pay can be delayed as long as ninety days.

In the same spirit of community service which the original group of Arkansas physicians demonstrated in founding Blue Cross-Blue Shield, and in the same spirit of community service which members of the Arkansas Medical Society demonstrated who at that time willingly signed participating physicians' contracts when Blue Cross-Blue Shield was in its infancy and without financial security, the committee feels the least that physicians of Arkansas today can do to demonstrate that they are mindful of community service and continue this original fine work is to become a participating physician, which of course most members of the Arkansas Medical Society have done. This is not coercion in any way, but simply positive reassurance to the patient and subscriber of Blue Cross-Blue Shield that the physicians of our Arkansas Medical Society stand behind his contract with that organization.

The committee feels that the very small minority of physicians who resent signing the participating physician's contract might well review the health and accident and hospital insurance situation in Arkansas prior to the origin of Blue Cross-Blue Shield. It is the sincere belief of the committee that had it not been for the pioneering effort of physicians establishing a nonprofit organization such as Blue Cross-Blue Shield, and who were sufficiently concerned with the economic aspects of medical care to willingly devote their time and services in developing and promoting nonprofit programs, the commercial companies would still be writing the unrealistic indemnity benefits which until recently had been the distinguishing feature of their offerings.

Pioneering should recognize no destination. Sustained continuing interest on the part of Blue Cross-Blue Shield Plans in broadening their certificates of membership with the advice and counsel of the medical profession is necessary to ultimately provide truly comprehensive health service protection to the population on a voluntary basis, rather than a governmental approach through the socialization of medical practice. This is your Blue Shield Plan — the committee feels that you need to be a part of it.

A motion was unanimously approved that a letter explaining how the committee felt about participating physicians' contracts be mailed to the Executive Secretary of the Arkansas Medical Society, instructing him to send a copy to all physicians who have not signed the contract, whether they are members of the Arkansas Medical Society or not.

III. Establishment of Insurance Committee (for matters not pertaining to Blue Cross-Blue Shield).

On numerous occasions the Liaison Committee with Blue Cross-Blue Shield has been called upon to give advice related to commercial insurance companies, especially those who have rendered questionable service to individuals in the lower income

groups. Although this was not a function of this committee *per se*, different ways and means whereby the Arkansas Medical Society could aid the Insurance Commissioner's office in improving the standards of health and accident insurance policies sold in the State were discussed. Mr. Whitmore, the Insurance Commissioner's representative, felt that the new advertising code adopted by the State Insurance Commissioner's office, patterned on the lines of the National Association of Insurance Commissioner's advertising code, would do much to help clear up some of the misunderstanding that arise by both the policyholder and the insurance company. In brief, it was felt that this work was not a part of the duty of the Liaison Committee with Blue Cross-Blue Shield. Because at the time of this meeting there was not an Insurance Committee of the Arkansas Medical Society, a recommendation was made and passed unanimously that this committee recommend to the House of Delegates of the Arkansas Medical Society the establishment of an Insurance Committee to deal with all other insurance matters other than those of Blue Cross-Blue Shield. (This has been done and there is now an Insurance Committee *per se* of the Arkansas Medical Society.)

IV. Commendation to Executive Director.

A motion was passed unanimously that this committee recommend to the House of Delegates of the Arkansas Medical Society that a resolution by that body be made commending Mr. John Rowland, Executive Director of Blue Cross-Blue Shield, and his entire administrative staff, all of whom on sudden notice took over and have so ably continued the fine program which was being carried on at the time of the unexpected death of the late Mr. Jack Redheffer, Executive Director of Blue Cross-Blue Shield since its origin in Arkansas.

V. Professional Relations Program.

It was felt that the relations between Blue Cross-Blue Shield and the members of the Arkansas Medical Society are now at an all time high, and in order to further maintain these relations, another state-wide program by the Professional Relations Department personnel of the Arkansas Blue Cross-Blue Shield is being planned. This program is to provide for the mutual exchange of ideas, with discussion, of any problems which the physician may have in dealing with Blue Cross-Blue Shield members or with Blue Cross-Blue Shield Plan.

REPORT OF SUB-COMMITTEE ON STATE HEALTH AND MEDICAL RESOURCES FOR CIVIL DEFENSE

JOSEPH A. BUCHMAN, Chairman

There has been no activity in the Sub-Committee on State Health and Medical Resources for Civil Defense since our last report.

REPORT OF SUB-COMMITTEE ON LIAISON WITH THE NURSING PROFESSION

HOYT CHOATE, Chairman

The Professional Nurses have had an unusually active year. They have drafted a new Nurse Practice Act. It is hoped that some differences with

the Arkansas Practical Nurses Association can be solved in time, to present the Act to the 1957 legislature. Much work has been done with advisory committees from Public Health, Civic Clubs, Medical and Economic groups to secure an act, contributing to better patient care.

A meeting is scheduled in early February between Professional Nurses and Practical Nurse groups, before the Arkansas Joint Commission for the Improvement of Patient Care.

A group of nurses employed in physicians' offices, drew us a list of minimum employment practices desirable for the Nurse. The list of standards was discussed before the Council last April at the state meeting. Since the conditions were already more than met in most instances, it was decided no opinion was needed from the Medical Society. No action has come from the Nurses concerning these requirements.

The new Nurse Practice Act needs our full cooperation when the differences with the Practical group are solved.

REPORT OF THE COMMITTEE ON THE AUXILIARY

LOUIS K. HUNDLEY, Chairman

This Committee through its Chairman has been in frequent contact with the President and Officers of the Woman's Auxiliary during the past year. They have consulted us on matters of policy and new programs. At the request of the President of the Arkansas Medical Society, the Auxiliary has assumed the sponsorship of the Essay Contest that is being promoted by the Association of American Physicians and Surgeons, Inc. Promotional material and library kits have been distributed through the county organizations to the various high schools. The Auxiliary has also concentrated on increasing their membership and so far have about seventy-five new members to show for their efforts. They have also carried out their regular projects such as Student Loan Funds, and the A.M.E.F. They have also carried out a program on safety throughout all of the county organizations. We feel that the Auxiliary has done a commendable job, and should continue to receive the unqualified support of the Arkansas Medical Society in all of their undertakings.

REPORT OF ADVISORY COMMITTEE TO THE ARKANSAS STATE MEDICAL ASSISTANTS SOCIETY

C. LEWIS HYATT, Chairman

This committee has had little activity during the past year. But our girls in the Medical Assistants Society have been as busy as beavers.

The Arkansas State Medical Assistants Society was born in November, 1954. The father was the Arkansas Medical Society and the mother the Pulaski County Medical Assistants Association. Careful planning and diligent work by the mother organization was really responsible for the birth of this healthy, lusty infant. To every individual in the Pulaski group we owe our thanks and appreciation. As I recall the business and correspond-

ence relating to the organizing I remember especially Miss Charleen Hardeman, Mrs. Elizabeth Marsh and Mrs. Elza Lee Dunn. Others of the Little Rock group gave much time and effort. Also, Mr. Al Ercolano of the Blue Cross-Blue Shield aided greatly in the initial effort; and Mrs. Elizabeth Peck of Michigan gave of her wisdom and experience. The first officers elected were: President, Miss Charleen Hardeman, Little Rock; recording secretary, Mrs. Vivian Harris, Monticello; corresponding secretary, Mrs. Elizabeth Marsh, Little Rock; treasurer, Mrs. Mattie Mae Hardaway, Texarkana.

Arkansas State Medical Assistants were one of the first 6 or 7 groups to organize on a state-wide basis. In October, 1956, the state organizations held a convention in Milwaukee, Wisconsin, and formed the American Association of Medical Assistants. We can be proud of our group who played an important part in the formation of the national association.

At present there are seven county Component Societies in Arkansas in the following counties: Drew, Garland, Miller, Ouachita, Pulaski, Sebastian, Union. We should have many more organized county groups. Doctors and their assistants in counties not organized are requested to aid in forming their county group.

Total membership in the Arkansas State Medical Assistants Society is 195. It should and will be much more. Officers of this enthusiastic group this year are:

President—Miss Eva Antonia, Hot Springs.

President-Elect—Miss Mary Nell Euper, Fort Smith.

Recording Secretary—Mrs. Frances Reibe, El Dorado.

Treasurer—Miss Faye Moser, Camden.

The Constitution and By-Laws of the Medical Assistants Society were recently approved by the Council of the Arkansas Medical Society. We should like to express our appreciation here to Dr. Joe Shuffield for his valuable aid.

For the information of the doctors of the State who do not know of this group I would like to quote Article II of the Constitution and By-Laws:

“Article II—Objects.

“The objects of this Society are:

- (A) To unite in an organization those persons who are employed in offices of members of the Arkansas Medical Society, medical hospitals licensed by the Arkansas State Board of Health, and medical laboratories approved by the Arkansas State Board of Health.
- (B) To inspire its members to render honest, loyal, and more efficient service to the profession and to the public which they serve.
- (C) To render educational and informative services to its membership.”

This report covers two years since this is the first report made to the medical society.

REPORT OF THE COMMITTEE ON SENIOR MEDICAL DAY

W. R. BROOKSHER, Chairman

The Third Annual Senior Day, jointly sponsored by the Arkansas Medical Society and the Arkansas Academy of General Practice was held May 12th, 1956, with President Richardson presiding. The program was presented by Randolph Ellis, Malvern, “The Challenge of General Practice”; Roger Dickinson, DeQueen, “Medical Ethics”; Ben N. Saltzman, Mountain Home, “Why I Entered Rural Practice,” and Louis K. Hundley, Pine Bluff, “The Doctor and Organized Medicine.” A dinner for senior medical students, wives and invited guests followed.

Senior Day has by now justified its existence and each graduating class of the School of Medicine, University of Arkansas, has continued to evidence appreciation of the program.

REPORT OF THE COMMITTEE ON VETERANS ADMINISTRATION AFFAIRS

H. ELVIN SHUFFIELD, Chairman

This committee has had no activity on either a state or national level during the past year. As mentioned in our last annual report, the A.M.A. headquarters has stopped having national meetings pertaining to these problems, but in recent correspondence, there is some evidence that a re-organizational meeting may be held in the early part of 1957. If such a meeting does take place prior to the dead line for the March issue of the state Journal, then a supplemental report will be rendered.

REPORT OF THE COMMITTEE ON SCIENTIFIC PROGRAM AND ARRANGEMENTS FOR ANNUAL SESSION

JOE NORTON, Chairman

The Program Committee of the Arkansas State Medical Society has arranged the program tentatively outlined elsewhere in this issue for the Annual State Meeting, April 23, 24 and 25, 1957. The official program starts Tuesday, April 23, so that members and guests will not have to travel to the meeting on Easter Sunday, April 21, but may travel on Monday, April 22.

The climax of the Annual Meet this year is the Professional Dedication of the large new University of Arkansas Medical Center in Little Rock on Thursday morning, April 25, and all of the program on that final day of the Annual Meet, Thursday, April 25, will be presented at the New Center.

There will again be an active Sports program—to begin this time on Easter Sunday, April 21, for the local members, and to continue and conclude on Monday, April 22. Awards for Sports Activities will be presented in a special ceremony at the end of the first official day's activities, Tuesday, April 23.

All exhibits will again be in the large Exhibit Hall of the Robinson Auditorium, and the spaces

ARKANSAS MEDICAL SOCIETY MEETING, APRIL 23-25, 1957

have been rearranged so as to allow more of commercial and scientific exhibits, and to allow an area for continuous showing of medical movies, arranged by Dr. Gilbert Dean from the film library of the American College of Surgeons. Dr. Lawrence Zell has arranged also many other fine scientific exhibits, including a Demonstration of Fracture Treatment (The Arkansas Orthopedic Society, arranged by Dr. Dixon Conlin), a Demonstration of Gross Pathology Specimens (The Arkansas Pathological Society, arranged by Dr. Merlin Kilbury, Sr.), and an exhibit offering a Physical Examination for every M.D. (including chest x-ray and ECG examinations, arranged by Dr. Randolph Ellis, with cooperation of the Arkansas Academy of General Practice, The Arkansas Heart Association and the Arkansas Trudeau Society, and the Arkansas State Board of Health).

All luncheons will again be in the Hotel Marion, using various available rooms. Note that there will be a large General Session luncheon for all members on each of the first two days, Tuesday and Wednesday, noon. We hope that all members in attendance will plan to be at each of these luncheons, which will feature our guest speakers of that particular day in a Question-Answer period.

Various specialty groups will meet concurrently with the Annual Meet, but the General Program has been so arranged to allow General Sessions, featuring our invited guest speakers, all day long in the Lecture Hall of the Robinson Auditorium, 9:00 A.M. to 5:00 P.M., so that there will be a continuous excellent program for all those not interested in the specialty group programs. We certainly hope that the members of the Society will take advantage of this special effort to provide quality program, and will attend the General Sessions throughout the day, as well as the General Session luncheons.

Dr. and Mrs. Fount Richardson will be hosts at a coffee at the Hotel Marion, Monday, April 22, 5:00-7:00 P.M., and all members are invited. Various specialty group banquets and luncheons are being arranged and will be announced later. The annual State Medical Party will be on Thursday evening, Hotel Marion Ballroom, 8:30 P.M., for our members and our guests. Our guests here will include the many guests invited for the Professional Dedication of the New Medical Center, and because of the numbers anticipated, we do not plan an annual banquet, but only a party, with coffee, soft drinks and dancing. The New Medical Center will be hosts at a party honoring their specially invited guests on Wednesday evening, and all members of the Medical Society are invited; the time and place will be announced later.

The House of Delegates will be asked to meet at the end of the Tuesday and Thursday sessions, probably about 5:00 P.M. on Tuesday, and 3:30 P.M. on Thursday. The Tuesday meeting will be in the Lecture Hall of the Robinson Auditorium, and the Thursday and final meeting will be in the New Medical Center. The Council meetings will be announced later, but it is hoped they can be early morning meetings again.

The exhibits will all go up in the Exhibit Hall of Robinson Auditorium on Monday, April 22,

ready for viewing Tuesday, April 23, and the exhibits must be dismantled and out of the Auditorium by 5:00 P.M., Thursday, April 25. A special invitation to view the exhibits will be given the Arkansas Medical Auxiliary and the students of the University Medical Center on Thursday morning, April 25, 8:00-10:00 A.M. Exhibit awards are planned.

Special evening meetings will be held by the Little Rock Academy of Medicine and the Little Rock Academy of Surgery, and the times and places and programs of these meetings will be announced later. The popular and instructive Cancer Program will be arranged again for Monday, April 22, by the Arkansas Chapter of the American Cancer Society.

On Thursday, April 25, all of the Scientific Program will move from the Auditorium to the New Medical Center, as noted on the program outline below. In addition to the scientific programs arranged on this day, the Memorial Service will be held at the New Center, the Professional Dedication Service of the New Center will be held on the grounds of the New Center, and there will be conducted tours over the entire Center all through the day. There will be an Academic Program continuing at the New Medical Center through Friday, April 26, and all members of the State Medical Society are invited and urged to attend.

We hope again that there will be many class reunions during the period of the Annual State Meeting. If we can be of any aid in arrangements for these, please feel free to call on us. Dr. John Wood of Mena has agreed to correlate these efforts, if asked.

The Program Committee wishes to publicly express thanks to Mr. Paul Schaefer, to Dr. Fount Richardson, to Dr. Alfred Kahn, to Dr. Jerome Levy, to Dr. Douglas Lawrason, and to the many others who have been such a help in arranging this annual meeting, 1957.

REPORT OF THE INSURANCE COMMITTEE

J. J. MONFORT, Chairman

Committee members: Dr. J. J. Monfort, Chairman, Batesville; Dr. W. J. Butt, Fayetteville; Dr. Sam Jameson, El Dorado; Dr. H. E. Mobley, Morrilton; and Dr. Daniel H. Autry, Little Rock.

The Arkansas Medical Society Insurance Committee offered its cooperation to the Insurance Department of the State of Arkansas, which was gratefully accepted by Mr. Combs, head of the Department.

Investigation was made on malpractice insurance from several sources. At the present time, all the complete information is not available. However, we are pleased to see that group malpractice insurance is being made feasible by the efforts of the Academy of General Practice on an individual state basis rather than a national basis and we hope that, in the near future, the American Insurance Company of Newark, New Jersey, (which is underwriting the American Academy of General

Practice Plan) and the other insurance companies such as Aetna, U.S.F. & G., the Hartford Group, and other companies will soon extend this type of policy to all legally licensed physicians and groups in Arkansas.

Several forms of claims for individual group and hospital insurance blanks were studied and we are obtaining the recommended forms of the Council on Medical Service of the American Medical Association to approve for Arkansas physicians.

Two business expense disability insurance plans were considered, one from the Washington National Life Insurance Company and one from the American Casualty Company, with representatives of each company appearing before the committee. After detailed consideration, the committee voted to recommend to the Council of the Arkansas Medical Society the American Casualty Company business disability insurance policy.

REPORT OF THE FIRST COUNCILOR DISTRICT PROFESSIONAL RELATIONS COMMITTEE

R. C. SHANLEVER, Chairman

I am pleased to report that we have received no written complaints or had any meetings of the First Councilor District Professional Relations Committee during the year 1956.

REPORT OF THE SECOND COUNCILOR DISTRICT PROFESSIONAL RELATIONS COMMITTEE

O. J. T. JOHNSTON, Chairman

There has been no activity of the Second Councilor District Professional Relations Committee in the past year.

REPORT OF THE THIRD COUNCILOR DISTRICT PROFESSIONAL RELATIONS COMMITTEE

M. C. JOHN, JR., Chairman

During the past year no complaints have been brought to the attention of the Third Councilor District Professional Relations Committee. Each member of the committee representing the respective county societies has been contacted and report that no grievance was filed with their society.

REPORT OF THE FOURTH COUNCILOR DISTRICT PROFESSIONAL RELATIONS COMMITTEE

H. T. SMITH, Chairman

No complaints have been filed with the Fourth Councilor District Professional Relations Committee and the committee has had no activity during the past year.

REPORT OF THE FIFTH COUNCILOR DISTRICT PROFESSIONAL RELATIONS COMMITTEE

JOE F. RUSHTON, Chairman

There have been no cases come before the committee during the past year and it is believed that professional relations have been excellent.

REPORT OF THE SIXTH COUNCILOR DISTRICT PROFESSIONAL RELATIONS COMMITTEE

R. R. KIRKPATRICK, Chairman

The Sixth Councilor District Professional Relations Committee has not met so far this year and there have been no events that required our attention.

REPORT OF THE SEVENTH COUN- CILOR DISTRICT PROFESSIONAL RELATIONS COMMITTEE

JACK KENNEDY, Arkadelphia, Chairman

There have been no complaints made to the Seventh Councilor District Professional Relations during the year and the committee has not had any activity.

REPORT OF THE EIGHTH COUNCILOR DISTRICT PROFESSIONAL RELATIONS COMMITTEE

HENRY G. HOLLENBERG, Chairman

During the past year the Pulaski County Medical Society has taken over the work of the Professional Relations Committee. Therefore, we are not functioning in the Eighth Councilor District. In talking to members of that Committee I understand that they have had approximately a dozen cases which on the whole have been satisfactorily handled for all concerned. I understand that they have continued the policy of handling these matters by separate conferences with the physicians and the complaining patient rather than to have any group meeting.

REPORT OF THE NINTH COUNCILOR DISTRICT PROFESSIONAL RELATIONS COMMITTEE

ROSS FOWLER, Chairman

There has been no activity of the Ninth Councilor District Professional Relations Committee during the past year.

REPORT OF THE TENTH COUNCILOR DISTRICT PROFESSIONAL RELATIONS COMMITTEE

ART MARTIN, Chairman

I am pleased to report that there has been no activity in the Tenth Councilor District Professional Relations Committee for 1956.

ARKANSAS MEDICAL SOCIETY MEETING, APRIL 23-25, 1957

BUDGET COMMITTEE

J. J. MONFORT, Chairman

The Budget Committee respectfully submits the following proposed budget for 1957:

Income	
Membership Dues	\$28,000.00
Journal Advertising	22,500.00
Interest on Bonds	200.00
Annual Session Booth Income	4,000.00
Annual Session Banquet and Registration	3,000.00
A.M.A. Reimbursement	245.00
Income from Medicare	7,000.00
Employee Contribution, Retirement Plan	114.00
	<hr/>
	\$65,059.00
Expenses	
Salaries	\$16,905.00
Journal Printing and Exp.	20,900.00
Travel and Convention	4,500.00
Council Expense	225.00
Telephone and Telegraph	1,500.00
Office Supplies and Expense ..	2,300.00
Postage	1,100.00
Dues and Subscriptions	200.00
Rent	1,716.00
Taxes	290.00
Contributions	350.00
Annual Session	5,200.00
Rural Health Committee	500.00
Public Relations Committee ..	500.00
Senior Medical Day	500.00
Stationery and Printing	750.00
Auxiliary	1,250.00
Special Committees	50.00
Auditing	125.00
Miscellaneous	50.00
Bond Premiums and Ins.	120.00
Legal Services	4,000.00
Retirement Fund	1,544.59
	<hr/>
	\$64,575.59

REPORT OF DELEGATE TO THE AMERICAN MEDICAL ASSOCIATION

JAMES M. KOLB, Delegate

The most important business taken up in the House of Delegates of the American Medical Association both in Chicago, Illinois, at the Annual Session from June 11th to 15th, and at Seattle, Washington, November 27th to 30th, 1956, was the proposed new "Principles of Medical Ethics," as published in the Journal of the Arkansas Medical Society in the August, 1956, issue on page 70. At Chicago, it was felt that there is too much implied and not enough said without a companion set of By-Laws to go along with the new "code," setting forth background rules which have been in effect for years. The hearing lasted a whole day before the reference committee. The House voted to refer it back to the Council on Constitution and By-Laws and take it up again in Seattle, Washington, in November. There we had a repeat performance of the June meeting, with the result that it was referred back to the Council on Consti-

tution and By-Laws, and a request that they publish their report at least six weeks before the New York Annual Session in June, 1957.

Your delegates request that each member of the Arkansas Medical study carefully the proposed changes when they are published in the Journal of the American Medical Association and let us know your views before the June meeting.

Other subjects before the House included: Veterans Medical Care; Radioactive Isotopes; Abandonment of the Clinical Meetings (which was voted down on the basis of needed publicity by meeting in the smaller cities of the United States which could not accommodate the Annual Session); Hospitalization for Alcoholics; Medical Practice in Hospitals; Medicare and numerous others.

A complete report of the meetings has been published in the Journal of the American Medical Association and we recommend that each of you read these.

One thing of utmost importance that should be called to your attention is the "American Medical Education Foundation." Several of the states have set aside a per capita assessment for each member to this fund. It varies from \$5.00 to \$25.00.

Resolutions to make it mandatory on a national basis have been defeated on several occasions. It is a very worthy cause. Arkansas has received much more than we have paid in. I would like to recommend to the House of Delegates of the Arkansas Medical Society that we study the feasibility of giving a per capita allotment of \$5.00 for each active member in the Society.

REPORT OF DELEGATE TO THE AMERICAN MEDICAL ASSOCIATION

R. B. ROBINS, Delegate

Dr. James Kolb of Clarksville and I represented the Arkansas Medical Society as delegates to the Clinical Session of the American Medical Association in Seattle, Washington, November 27-30, 1956.

We were strongly impressed with the address of Dr. Dwight H. Murray, President of the A.M.A. when he strongly condemned governmental intervention in medicine. He expressed the belief that the quality of medical care cannot be as high when both patient and doctor are dependent upon government, because initiative succumbs to dictation and self-reliance is replaced by the crutch of government.

Dr. Kolb and I were reminded that Congressman Oren Harris of Arkansas would be Chairman of the Interstate and Foreign Commerce Committee in the coming Congress. This committee considers all health legislation and it places our own Congressman in a very strong place of leadership. It is well for Arkansas physicians to have this information. Congressman Harris has been invited to address the next meeting of the American Medical Association which will be held in New York City in June.

There was much concern among many Arkansas physicians regarding the proposed ten-section revision of the Principles of Medical Ethics. We are glad to report that the House of Delegates decided to postpone action on this matter for further con-

sideration and study. Sections 6 and 7 were the controversial sections and it was decided that the following four areas needed more specific attention:

- (1) Division of fees;
- (2) The dispensing of drugs and appliances;
- (3) The corporate practice of medicine;
- (4) Greater emphasis concerning the relationship between physicians and patients.

The House of Delegates considered the matter of Veterans' Medical Care again and recommended that new legislation be enacted limiting such care to veterans with peacetime or wartime service whose disabilities or diseases are service-incurred or aggravated. The House condemned as unlawful the practice of Veterans Administration hospitals which admit patients who are covered by workman's compensation insurance or by private health insurance and which render bills for the cost of their care.

Actions were taken on a wide variety of subjects which will be reported to all physicians in the coming issues of the Journal of the American Medical Association.

REPORT OF THE EXECUTIVE SECRETARY

PAUL C. SCHAEFER

During the year 1956, the Arkansas Medical Society had 1,245 members, 1,134 of these are dues paying, 51 have affiliate status, and 60 are life members.

The activities of your headquarters staff have multiplied at an increasing rate. With the problems of legislation created by Congress, increasing auxiliary activity, assistance to the growing Medical Assistants Society and the Military Dependents Medical Care Program, the executive secretary and three stenographers are kept very busy. One new employee was added to take care of the Military Dependents Medical Care Program. This addition to personnel with attendant increase in equipment necessitated an increase in space. The headquarters now consists of four rooms totalling 1,021 square feet at an annual rental of only \$1.68 per square foot.

The beginning of the Medicare Program was attended by the usual confusion, false starts, errors and other troubles. It is believed that most of the troubles are behind us and that processing and payment of claims will proceed smoothly. Of great assistance in the program is the fact that the importance of proper completion of the claims form is now becoming known to physicians.

The Medicare program reimburses the society for actual costs of administering the program including postage, telephone, travel expense, a proportionate part of salaries, depreciation on all office equipment and other expenses. It is estimated for budget purposes that these expenses will amount to approximately \$7,000 in 1957. The actual amount will depend on the number of claims made under the program.

Completely aside from administration of Medicare, the increased activities of the Society and its headquarters, plus the effects of inflation, have

resulted in the largest budget ever submitted to the House of Delegates. While the budget predicts slightly more income than anticipated expenditures, this can only be achieved by limiting future expansion of the work of the Society.

The duties, functions, and projects of the Executive Secretary are directed by the Council of the Arkansas Medical Society; the suggestions of individual members, however, are always welcome and will be referred to the Council for its approval of new functions for the Executive Secretary.

THE REPORT OF THE ARKANSAS STATE ADVISORY COMMITTEE TO THE SELECTIVE SERVICE SYSTEM

GERALD H. TEASLEY, Chairman

The Medical Advisory Committee has had relatively little activity during the past twelve months. Most of the graduates of Medical School are applying for commission in one of the military services and are being deferred for one year in order to complete their internship. Volunteers from this group have made it unnecessary to call older physicians to duty. It is hoped that this pleasant situation will continue until the end of the present Selective Service System Law. Congress may or may not extend this specific portion of the law which concerns physicians, dentists, nurses and veterinarians.

REPORT OF THE ARKANSAS STATE CANCER COMMISSION

W. R. BROOKSHER, M.D., Secretary

The Arkansas State Cancer Commission continued its program of providing hospitalization for indigent cancer patients, maintenance of the Central Cancer Registry and of the seven designated permanent tumor clinics and of administration of funds provided by the Arkansas Division, American Cancer Society for domiciliary care of indigent cancer patients in the fiscal year 1955-1956. Because of limitation of funds, it was necessary to discontinue hospitalization for one month of the year.

1,377 patients were handled during the year, a slight increase over the preceding year. Of these 863 were patients seen for the first time. Hospitalization was provided for 591 patients and domiciliary care was furnished to 232 patients. The files of the Central Cancer Registry now comprise the records of 9,209 patients with cancer in Arkansas.

229 physicians gave voluntary service to these patients during the year of whom 66 were participating for the first time. The incidence of malignant lesions in the tumor clinics of the state followed the customary ratio of skin lesions, carcinoma of the cervix uteri and malignancy of the breast as leading sites.

During 1955, 2,126 patients were reported as deaths from cancer in Arkansas.

The cooperation of the physicians and hospitals in the State in these services to indigent cancer patients is most appreciated.

REPORT OF THE ARKANSAS STATE MEDICAL BOARD

The Secretary of the Arkansas State Medical Board makes the following report of the activities of this Board since the last meeting of the Arkansas Medical Society:

The Officers and Members are as follows:

Dr. G. D. Murphy, Jr., Chairman
Dr. M. L. Harris, Vice-Chairman
Dr. Joe Verser, Secretary and Treasurer
Dr. H. J. Hall
Dr. Frank M. Burton
Dr. Jeff Baggett
Dr. C. H. Young
Dr. Wm. A. Snodgrass, Jr.
Dr. J. Max Roy
Mr. Eugene R. Warren, Attorney

The Board investigated every case of violation of the Medical Practice Act reported to the Secretary during the year. Two court convictions were obtained and one case is now pending.

The Board, in cooperation with the Arkansas Medical Society, has sponsored a proposed new Medical Practice Act, which is now pending in the Legislature. If passed, this Act will alleviate many of the problems confronting this Board.

A yearly financial report of the Board's activities, as prepared by Winter, Johnston and Company, C. P. A. Accountants, was sent to and approved by the Council of the Arkansas Medical Society and published in the Journal.

Following is a report of the Board's proceedings from February 1, 1956, to February 1, 1957:

Physicians registered for 1957:

Resident	1,417
Non-resident	564
Physicians licensed by examination	67
Physicians licensed by reciprocity	27
Physicians certified to other states	67
Licenses revoked for non-payment of annual registration fee	49
Licenses suspended for non-payment of annual registration fee	41
Physicians placed on probation for violation of Medical Practice Act	1
Court convictions obtained for violation of Medical Practice Act	2
Cases pending for violation of Medical Practice Act	1

Following is a financial report covering the period February 1, 1956, to February 1, 1957. A yearly audit by a C. P. A. will be made in June, 1957.

Cash balance in bank—February 1, 1956 \$13,938.09
Bonds—Series E, purchase price 6,000.00

Collections from the following:

Registration fees	\$5,767.00
Reciprocity fees	2,800.00
Certification fees	945.00
4-year Examination fees	700.00
Final Examination fees	1,350.00
Primary Examination fees ..	1,900.00
Duplicate Certificates	15.00
Postage and exchange on checks35

Directory Sales	136.00
Physical Therapy fees	140.00
Temporary Permit	5.00
Interest on Bonds	120.00
	13,878.35

Total \$33,816.44

Expenditures:

Salary—Secretary and assistant, Withholding & FICA Taxes, and expense of Board Members	\$ 9,615.47
Attorney's fee, expense and investigations	3,192.83
Office Rent	225.00
Dues to Federation of State Boards of U. S.	100.00
C. P. A. Audit	175.00
Refunds	97.00
Office Expense — printing, telephone, postage, stationery, supplies, bond and directories	1,725.06

Total \$15,130.36

Total Expenditures \$15,130.36

Bonds on hand 6,120.00

Cash Balance in Bank

February 1, 1957..... 12,566.08

\$33,816.44

REPORT OF THE COMMITTEE ON PUBLIC RELATIONS

DALE ALFORD, Chairman

The retiring chairman of this committee desires to take this opportunity of reviewing briefly the various activities of this committee for the past four years and based upon this experience make some recommendations for the future.

During the early days of active organization of this committee there was great emphasis upon this phase of the work of the Medical Society largely due to unpleasant experiences surrounding the defeat of a bill presented to Congress which would have in effect precipitated socialization of medicine. All of us realized that as physicians we were poorly trained in the vocational field of advertising, press relations, and public relations. Therefore, several members of this committee have at various times attended the Public Relations Institutes sponsored by the American Medical Association. These meetings, usually lasting for a period of three days, were attended by the members of this committee at their own expense and at quite a sacrifice of time from their practice. The chairman wishes to express deep appreciation for this "deed performed above and beyond the call of duty."

This committee in the past four years has accomplished the following "firsts":

Sponsored and successfully executed the first Medical Public Relations Institute in this State. At this very successful meeting we were honored to have as our guests the Director of Public Relations of the Reynolds Metals Company, a former governor of Kentucky, the honorable Keen Johnson; Director of Press Relations of A.M.A.; Field

Director of Public Relations, A.M.A.; a representative of the Arkansas Dental Society, Dr. W. R. Alstadt, President-Elect, American Dental Association; Editors of both the Arkansas Gazette and the Arkansas Democrat; and several other capable speakers.

Unfortunately this type of meeting was discontinued after the second year because of the small number of doctors who were able to attend this type of medical meeting.

At the second annual public relations meeting this committee attained another "first" through inviting for the first time a representative of the State Nurses Association to address a meeting composed of physicians.

Other firsts included successful radio and television panels of physicians as well as special meetings between physicians representing the medical society and the various communications media.

Lastly, a "first" in which this committee has taken the greatest of pride has been the sponsorship and organization of that great and loyal group of public relations medics, The Arkansas Association of Medical Assistants. On a state-wide basis this organization is still in its infancy, but we predict it will become a very valuable source of pleasure and instruction for all our wonderful assistants.

None of the above named firsts could ever have been successfully attained without the efficient and enthusiastic leadership and aid of the Arkansas State Medical Society's own public relations expert, our colorful, air-minded Executive Secretary, Mr. Paul C. Schaefer.

It has oft been repeated that a good, conscientious physician and his relationship with a satisfied patient is the best of all medical public relations. From hearing and reading a great deal about our own public relations over the past few years we know that this is the only relationship of medicine which will survive through all times and with all sorts and conditions of men.

In brief our recommendations for good medical public relations can be superbly summed up in the subheadings listed in Chapter 6 of the book, *Public Relations in Medical Practice* by James E. Bryan, published by the Williams & Wilkins Company of Baltimore. For emphasis these subheadings of this chapter on "The Doctor and His Community" are listed as follows:

- The Decline of the Doctor as a Cultural Leader.
- Let's Get Beyond the Clan.
- "See You in Church, Doctor!"
- Good Will Must Be Earned.
- The Country Club Is Not Enough.
- "No Man Is An Island."
- The Doctor's Unique Role in the Community.
- A Sick Society Needs the Doctor.
- The Doctor as a Political Animal.
- Pitfalls of Political Proselytizing.
- Newspaper Relations for the Individual Physician.
- Health Information Techniques.

Space does not permit enlargement upon these topics, therefore we commend this book to all our colleagues. This book contains ideas which will inspire you to better personal relations, better physician relations, and better public relations.

ANNUAL REPORT TO THE ARKANSAS MEDICAL SOCIETY FROM ARKANSAS STATE BOARD OF HEALTH

Vital Statistics

The Bureau of Vital Statistics was established by Act 96 of 1913. It is charged with the filing, compilation, analysis, presentation, and distribution of statistical events which include births, deaths, marriages, divorces, annulments, legal separations, and adoptions.

A total of 42,260 births were recorded in the calendar year of 1955, representing a rate of 23.7 per 1,000 population. 15,092 deaths were recorded, showing a death rate of 8.5 per 1,000 population.

The ten principal causes of death for 1955 were as follows:

		Rate per 100,000 Pop.
Cause of Death	Total	
1. Heart disease (all forms)	5,098	267.0
2. Neoplasm (cancer)	2,065	108.1
3. Vascular lesions affecting the central nervous system	1,856	97.2
4. Accidents (all forms)	1,064	55.7
5. Pneumonia (all forms)	458	24.0
6. Birth injury, asphyxia, and infection of newborn	291	15.2
7. Nephritis (all forms)	281	14.7
8. Tuberculosis (all forms)	256	13.4
9. Diseases of the liver, gallbladder, and pancreas	214	11.2
10. Immaturity (prematurity)	201	10.5

All deaths are coded as to primary statistical cause according to the rules of the **Manual of Joint Causes of Death** and set forth in the **International Statistical Classification of Diseases, Injuries, and Causes of Death**.

11,860 delayed certificates and 16,078 prior 1941 certificates of birth were placed on file during the year 1955.

Hospitals

During the 1955-56 fiscal year, the Division of Hospitals licensed 152 hospitals and 66 nursing homes. Routine inspections of many of these hospitals and nursing homes were made. Also, many inspections of existing buildings were made to determine their suitability for conversion to nursing homes.

In the Hill-Burton Program, a Statewide survey of medical facilities for the 1956-57 "State Plan for the Construction of Hospitals and Health Facilities in Arkansas" was completed. The "State Plan" was prepared, reviewed, and approved by the Public Health Service on June 1, 1956.

The Hill-Burton Program in Arkansas is administered by the Division of Hospitals under the supervision of the State Health Officer. The administration of this program involves the review and approval of plans and specifications, review and approval of equipment lists, preparation of applications and other forms required by the Federal government, periodic inspections of the projects during the construction period, etc.

Local Health Services

An inadequate number of qualified professional public health workers on duty in the counties, cities, and the central office to serve the communities of the State with basic public health services remains our major problem in advancing and improving the overall public health program. During the fiscal year and as of June 30, 1956, the counties, districts, and cities of the State that maintained full time local health units were served by the following public health workers:

- 8 medical directors
- 101 graduate, clinic, and public health nurses
- 1 health educator
- 56 sanitarians
- 90 clerical workers

The slight gain in professional workers since the last report has been insignificant when one considers the fact that at least twelve to fifteen additional full time physicians are needed, as well as one hundred and fifty nurses and twenty-five sanitarians to maintain minimal basic services to our population of slightly less than two million.

Protecting the public's health is a moral and legal responsibility of the State, county and city units of government. Additional funds for public health purposes must be made available from some source if we ever hope to maintain a public health program in each of our seventy-five counties, adequately staffed and rendering adequate health services.

Public Health Education

A new record-keeping system and new film-service techniques have enabled the film library to meet increasing demands for services with approximately the same personnel time as used in previous years. An annotated and indexed catalog listing all titles added to the collection since 1952 was recently made available. While the number of bookings has not changed significantly during this fiscal year, the pattern of use has changed. This is probably due to the advent of television. The trend is away from single showings to large, mixed, lay groups toward selective showings in a teaching situation by schools and colleges, churches, hospitals, professional training institutions, and others. A card catalog of films by title, subject and source has been set up by purchase of cards from the Library of Congress.

Steps have been taken within the last year to put more health education material on television. TV spots on seven health subjects and prints of a film on rheumatic fever have been placed with each of the six TV stations in the State and are used frequently. With consultation with other agencies, the Maternal and Child Health Division and the Public Health Education Division produced a one-minute television short, KEROSENE — KILLER IN A CAN. This Division now has a collection of twenty-one titles of films cleared for television, kept separately for that purpose, and not circulated with the regular film library prints. The health educator took the major responsibility for a mental health series of eight programs using films and live panels on station KARK-TV, Little Rock, Arkansas.

Plans for the coming year include the completion of the record system for literature for distribution, the establishment of an improved record system for magazine subscriptions, and the bringing of library records up to date. Beyond this, the focus will be on the fuller use of television in educating the public and better utilization of all of the health education materials available.

Communicable Disease Control

There is no doubt that the outstanding accomplishment of the Communicable Disease Control Division in 1956 was the promotion of the poliomyelitis vaccination program. With Federal funds for the purchase of Salk poliomyelitis vaccine and the administration of this vaccine being made available late in 1955, it was possible early in 1956 to supply most of the counties of the State with vaccine and supplies to administer two doses of vaccine. This was done in accordance with plans worked out jointly with the State Medical Society and the State Board of Health. Three different methods of giving vaccine were agreed upon:

1. Physicians to administer Federal vaccine in their offices
2. Physicians to administer vaccine in public clinics
3. Vaccine to be administered by local health unit personnel.

Despite the rather cumbersome and complicated way of getting vaccine into the susceptible age groups, many counties succeeded in protecting a high percent of the eligible. The Act of Congress defined the eligible person to receive poliomyelitis vaccine as one who had not attained his twentieth birthday and all expectant mothers.

Another controversial provision was that no means test was to be applied to persons eligible to receive public vaccine. Inasmuch as poliomyelitis vaccine was available commercially this latter provision was a source of much contention. It can be estimated that about 500,000 doses of vaccine will have been given by the end of the year. Most of the poliomyelitis vaccine is now being administered in public clinics by health unit personnel. Where poliomyelitis outbreaks have occurred it has been among unvaccinated persons.

Tuberculosis Control

The Division of Tuberculosis Control has charge of the supervision of known cases of tuberculosis and assists in discovery and diagnosis of new ones. During the fiscal year July 1, 1955, to June 30, 1956 the Central Case Register aided in the supervision of 13,049 known cases, a five percent increase over the previous year. More than half of these have active infectious disease and require close intensive supervision. A total of 1,451 cases were reported to the State Board of Health for the first time. This represents a 16.5% decrease from the previous year and reflects the national downward trend, although the morbidity rate is still considerably higher than in the nation as a whole. The tuberculosis mortality rate in Arkansas is the third highest in the nation; it showed a 16% rise over the fiscal year 1954-1955.

Venereal Disease Control

A total of 2,624 previously untreated syphilis cases were reported to the Venereal Disease Control Division during the fiscal year. In the same period, 2,159 individuals were reported to have acquired gonorrhea. This represents an increase in early infectious syphilis (primary and secondary) of 16%, in total syphilis of 33 percent, and in gonorrhea of 68 percent over the previous year. The upward trend in venereal disease rates noted during fiscal year 1954-1955 was therefore continued for the second consecutive year. While this is a matter of some concern, it is felt that these changes probably do not denote an increased incidence of venereal disease, but are rather a reflection of two principal factors: (1) an increase in the number of diagnostic observations performed in public clinics from 41,113 during fiscal year 1954-1955 to 55,521 during fiscal year 1955-1956, and (2) improved morbidity reporting practices.

Maternal and Child Health

Staff members assisted in teaching courses in public health for senior and junior students of the University of Arkansas School of Medicine and senior pharmacy students; participated in an orientation program for nine public health nurses, in addition to numerous workshops, institutes, and conferences; and arranged programs of observation for physicians from British Honduras, Colombia, Egypt, Pakistan, and Paraguay.

We continued support to the Special Project for Obstetric Education and Consultation in the U. of A. School of Medicine, and to the Arkansas Council on Children and Youth, and co-sponsored the establishment of a Hearing and Speech Evaluation Center.

Maternity conferences were held regularly in 27 counties by local physicians assisted by public health nurses. 3,926 expectant mothers attended the conferences, a considerable increase over any year up to this time. This Division provided the special equipment required for these conferences.

Public health nurses made 7,087 visits to 4,120 maternity patients in the prenatal period; 3,393 visits to 2,104 postpartum patients, and taught maternity classes in 17 counties for 119 enrollees. All maternity nursing activities were slightly decreased from last year.

Midwife Control

Only 493 midwives reported deliveries in 1955, compared to 1,403 ten years ago. The public health nurses under guidance of this Division, carry on a continuous program of midwife instruction and simple training. Permits are granted on an annual basis to those midwives who follow regulations and are a legal requirement for practice of midwifery. Even with the decrease in number, midwives delivered 4,912 or 11.7% of the live births in the State for 1955.

Infant and Child Care

Premature infants accounted for 454, or 11% of the 4,260 infants admitted to public health nursing service and received 1,207, or 14% of the 8,645 nursing visits to that age group. County health

units are provided with incubators, tiny clothing, and feeding supplies, and with carrying cases for transporting premature infants. This Division works with physicians, nurses, and hospitals to reduce incidence in premature infants, of retrolental fibroplasia found to be induced by too-high concentration of oxygen in incubators.

School Health

Staff consultants supervised hearing screening programs in schools in 35 counties for 39,584 children and vision screening in 44 counties for 50,788. Of these, approximately 4,800 were referred for medical attention. Equipment for testing was furnished by this Division.

Vital Statistics

Live births dropped to 42,050, the lowest in ten years; white births totaled 28,961, the lowest since 1939; Negro births have varied little since 1949—this year 13,089 having been reported.

This year shows no appreciable change in infant mortality. Of the 1,109 deaths, 614, or 21.2 per thousand live births, were white. Non-white accounted for 495, a rate of 37.8 per thousand live births.

Maternal deaths declined slightly, with 30 deaths recorded for an overall rate of .7 per thousand live births (.3 white — 1.6 non-white.) The latest National Report (1953 and 1954) rates Arkansas 6th from highest in maternal mortality among the states and 22nd highest in infant mortality.

Heart Disease Control

During the past twelve months this Division has been cooperating very closely with the Arkansas Heart Association, the Department of Cardiology at the University of Arkansas School of Medicine, local county medical groups, and certain civic organizations in further developing physician education, public education, and community service.

In addition to the above cooperation this Division continues to cooperate with the Arkansas Heart Association and local medical societies in establishing and further developing permanent local heart clinics. The establishment of some four or five such clinics is being planned. They will be financed locally, by the Arkansas Heart Association, and by the Arkansas State Health Department.

Mental Health

The all-purpose out-patient mental hygiene clinic located at the University of Arkansas School of Medicine continued, during the year, to receive financial support from the State Health Department. These Federal grant-in-aid funds were provided by this Department to provide salaries for one psychiatrist, one clinical psychologist, and two clerical workers for the clinic.

The clinic has been open four and one-half days, or 44 hours, weekly. The number of new admissions during the year were 430 and 310 carried over from the preceding year. Some 137 patients were terminated after diagnosis and treatment. The total number of interviews with patients were 2,269.

Public Health Nursing

County by county — 119 nurses are employed now; 271 more are needed to meet **minimum standards**. Eleven (11) counties do not have any nursing service. Each nurse is attempting to help the community where she works, with all the services that the local department provides, but one nurse cannot do the work that is considered normal for three nurses. One nurse employed in each county and three needed is the average situation throughout the state.

WHAT CAN YOUR COMMUNITY DO TO HAVE A BETTER HEALTH PROGRAM?

Be informed about the health needs in your county.

Convince local government officials of the need for financing an adequate number of nurses; support county officials in increasing their financial participation.

Extend the service your public health nurse is prepared to give by volunteering to assist her in some phase of the program.

Encourage and recruit for preparation in public health nursing at least one out of every 10 young women who graduate from your high school yearly.

We can improve this present situation if citizens, professional workers, and government officials earnestly desire it enough to work together to meet these needs.

Dental Hygiene

Although it has been the recently established objective of the State Health Department to maintain rather than to enlarge on the number of fluoridation installations throughout the State, it has been felt that the Division of Dental Hygiene has a moral responsibility in giving aid to those dentists who desire help in the establishment of fluoridation programs.

Of vital importance to the maintenance of a minimum dental health education program in Arkansas is the employment of a part-time or full-time dental health education specialist. Needless to say, there is an extreme need for a full-time Dental Director. Efforts have been constantly made to provide information concerning this position to various interested parties and organizations. Obviously, all efforts to secure a full-time Director will be futile until such financial compensation is provided that is commensurate with the work and with the financial standards accepted throughout the nation.

Sanitary Engineering

Engineering Division

The engineering services involved in the control of environmental sanitation is provided by this division. This includes public water supplies, swimming pools, public sewerage systems, water and sewerage systems for public parks, schools, and state institutions, new cemetery sites, and other public health engineering problems.

Public Water Supplies

New water supplies were constructed this year at Dell, Newark, and Cave City. This brings the number of public water supplies in the State to 219, and 24 supplies for parks and state institutions, and 55 supplies for summer camps. Approximately 45% of the total population of the State depend upon these supplies for a source of water supply. Water samples are collected each month from most of these water supplies for bacteriological analysis either by our district engineers or through cooperation of the water works superintendent. A continuous educational program by monthly district meetings and a three-day annual short school for water works personnel is sponsored by this Division.

Some type of treatment is provided at 157 of the 219 public water supplies to insure a safe and wholesome water supply. Chlorine treatment is practiced at 130 water supplies to insure the safety of the supply. Fluoride is now applied or controlled at 30 water supplies to reduce the incidence of dental caries.

This Division reviewed and approved 93 sets of detailed engineering plans for proposed improvements for water works systems.

Public Sewerage Systems

There are now 137 public sewerage systems in the State serving approximately 34% of the State's population. Major improvements have been made in 30 towns by the completion of 66 sewerage construction contracts during the past year.

Swimming Pools

This was a record year for swimming pool construction, and we now have under supervision 124 swimming pools and 23 bathing beaches.

Plumbing

Routine activity for this year included inspections, licensing, investigations, educational and promotional programs—all of which have shown steady progress.

Special emphasis for the year has been on promotion of local plumbing programs and education of the local administrators—all with gratifying results.

A very successful plumbing conference and short school was held in September of 1955.

Numerous one-night educational meetings, code reviews, and inspector-plumber schools have been held in all sections of the State.

Plumbing inspections of a cross-section of the State made by State plumbing inspectors indicate an increase in the quality of plumbing installations in Arkansas. Reports also indicate an improvement in overall knowledge and ability of the plumbers. This year there was a very definite upgrading of the quality and knowledge of the local plumbing inspectors. The Division was limited during the year by personnel problems in the inspection staff. The major problem is the turnover of inspectors and the necessary training period for replacements.

Food and Drug Control

The Division of Food and Drug Control is an agency designed to protect and regulate the food and drug supply of the State of Arkansas. This regulation and protection is achieved primarily through the administration of (1) The Arkansas Food, Drug, and Cosmetic Act, (2) The Barbiturate and Benzedrine Act, and (3) The Uniform Narcotic Drug Act.

The Food and Drug laboratory conducted 2,242 determinations on 314 samples submitted for examination. All categories of foods and drugs are included in these figures. Sixteen percent of the samples analyzed were violative.

Investigations along with laboratory analyses resulted in the prosecution of twenty-nine (29) cases against those violating food and drug laws. Twenty-four (24) convictions were sustained, totaling \$2,165.00 in fines. In addition, some convictions carried jail sentences. Five cases were dismissed and at this writing, seven cases are pending.

Decomposition, filth and rodent and/or insect contamination led to the condemnation of 168,244 pounds of food. In this total were 120,000 pounds of decomposed strawberries, including "pick-outs", "culls", and "floor sweepings". The berries were to have had the juice extracted and sold for the purpose of manufacturing jelly or strawberry wine.

Dairy Products

Dairy products are those products made from milk but which do not include Grade "A" Milk. Dairy products manufactured in Arkansas are ice cream, ice milk, milk sherbet, ice or ice sherbet, Mellorine, cheddar cheese, swiss cheese, cottage cheese, dried whey, condensed skim milk, evaporated milk, and butter.

Inspections, laboratory analyses, issuance of licenses, seizures, embargoes, or destruction of milk to prevent distribution of unsatisfactory products, and certification of the sanitary quality of dairy products for interstate shipment, are some of the activities.

Inspections vary in frequency and thoroughness. When the inspection process is oriented toward instruction, it is one of the most effective teaching devices. General sanitation, methods of handling, storage and refrigeration facilities, wash rooms, etc., are subjects which are covered. A routine followup visit to see that the corrections are made is also a part of the complete program.

Milk Control

Following are the activities of the Milk Control Division for the year ending July 1, 1956:

1. Twenty-eight sanitary surveys made to determine whether the law is being enforced or not. These surveys have to be made in order to certify this milk for interstate shipment.
2. Three new pasteurization plants built.
3. Forty-two new milk barns built.
4. Five new laboratories established for the examination of milk and milk products.
5. Eight hundred forty-two farm water supplies tested and approved.

Insect Vector Control

The residual premises spraying vector control program is conducted in thirteen counties in the delta areas of the Mississippi, Arkansas, Red, and White River basins. 7,544 premises and 1,577 out-buildings were treated with a 5% DDT, 5% chlordane, and a 5% malathion concentrate. This represented about 40% of the occupied homes in the control zones. The counties participating in the program appropriated approximately \$16,800 from which they paid the cost of the program. The cost includes salary of the local supervisor and spray laborers, cost of chemicals and spray equipment, maintenance, and operation of equipment, etc. Spray fees collected for the spray service are retained by the county. Trucks and some equipment used in the program are loaned to the county health units in the participating counties. Programs are being conducted in 1956 in all counties in which programs were operated during 1955.

Mosquito larvicide programs are being conducted in thirty-four towns. The entire cost of these programs is paid by the towns, with appropriations totaling approximately \$85,000. Technical advice and supervision is furnished by the State Health Department.

Water Pollution Control

In June the Commission received a request from an industry for a special study of the Ouachita River. This survey was completed in July. The following work statistics approximate that portion accomplished in June:

- 15 complete samples
- 180 separate analyses
- numerous field tests
- 30 river miles surveyed.

In conjunction with the Game & Fish Commission's assignment of a biologist to the Commission in June, a series of toxicity tests was initiated. Approximately 100 analytical determinations were made for this phase of work.

Additional items include the holding of one public hearing; preparation of preliminary specifications for survey of Ouachita River Basin by consultant; \$15,000 grant from Governor's emergency fund for special Ouachita River Basin survey; minor surveys for Standard Rendering, and Jonesboro; and analytical services to cities of McGehee, Heber Springs, and Piggott.

State Hygienic Laboratory

During 1955-56 it became apparent that a shift in emphasis was taking place in the laboratories as reflected by an increased demand for bacteriological examinations and a decrease in the number of serological tests for syphilis. This was especially noticeable in the increased number of sputums examined for tuberculosis. A rising trend began in March, and by July over 1,000 per month were being received;—over three times the normal

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monthly average of 300. Requests for enteric bacteriology also continued to increase.

A general summary of the year is as follows:

	This Year 1955-56	Last Year 1954-55
Chemistry		
Total samples received	856	860
Total tests performed	7308	7107
Bacteriology		
Total specimens received	29727	28149
Total tests performed	43672	39231
Syphilis Serology		
Total specimens received	143688	152589
Total tests performed	267545	285547
TOTAL SPECIMENS RECEIVED IN ALL DIVISIONS	174271	181598
TOTAL TESTS PERFORMED IN ALL DIVISIONS	318525	331885

Summary of Premarital Blood Tests In Arkansas

	Positive	Weekly Positive	Total
Bureau of Laboratories, ASBH	367	273	15465
Private laboratories approved by ASBH	151	72	14555
Approved laboratories in other states	17	2	589
TOTALS	535(1.7%)	347(1.2%)	30609

COUNCIL MINUTES

HOTEL MARION, LITTLE ROCK

11:00 A.M., Sunday, February 3rd, 1957

The Council of the Arkansas Medical Society met Sunday, February 3rd, 1957, at the Marion Hotel in Little Rock. Present were: Hundley, Fowler, Wade, Jr., Dalton, J. W. Smith, E. Shuffield, Wood, Monfort, Whittaker, Kolb, Edwards, Brown, Roy, Richardson, Norton, Workman, Ellis, Robert Jones, Brooksher, Drennen, J. Shuffield, McDaniel, Dickinson, H. T. Smith, Long, Rodgers, Kahn, Wm. A. Snodgrass, R. A. Calcote, Edgar Easley, John Watkins, Eugene Crawley, John Hundley, Douglas Lawrason, Mr. Eugene Warren, Mr. Peter Deisch, and Mr. Schaefer. The Council transacted business as follows:

I. Joe Shuffield discussed H. B. 86 (the Osteopaths' measure to give the osteopaths the privilege of practicing medicine and surgery and placing them on the State Medical Board), H. B. 14 (proposed new State Medical Practices Act) and another measure by the osteopaths which may be numbered H. B. 225. Shuffield warned the Council that H. B. 86 was extremely dangerous and that the osteopaths had made some progress with legislators. He requested the active assistance of all

members of the society in opposing H. B. 86 and passing H. B. 14. Upon the motion of Monfort and E. Shuffield, the Council voted to ask the Legislative Committee of the Auxiliary to aid in a campaign to prevent the lowering of the standard of medical practice in Arkansas by the extension of privileges to osteopaths.

II. John Hundley spoke to request that certain amendments to H. B. 14 be made, feeling that the measure was not strict enough. Upon the motion of Kolb and Edwards, the Council requested Dr. John Hundley, Mr. Deisch, and Mr. Warren to adjourn to another room to discuss Dr. Hundley's complaint.

III. Chairman Hundley explained the request of the American Medical Association for a list of three nominees to serve as AMA Legislative Committee liaison man in Arkansas. Upon the motion of Kolb and Monfort, the Council voted to cooperate with the AMA and elect three nominees. Joe Shuffield and W. R. Brooksher were nominated and declined. After considerable discussion about breaking in new men in such positions with the guidance of an experienced member, the Council prevailed upon Brooksher to take the position as the first of the three nominees to be presented to the AMA. A written ballot was taken and Hugh Edwards and Clyde Rodgers were elected for the other two places.

IV. Dr. Edgar J. Easley, president of the Arkansas Heart Association, presented a plan for the conduct of cardiovascular clinics throughout the State. Upon the motion of Richardson and Kolb, the Council voted to postpone consideration pending study by a special Council appointed committee, the committee to study the project before the next Council meeting and report to the Council. Appointed were: Chairman, L. A. Whittaker; members, Perry Dalton and Daniel Autry.

V. E. Shuffield reported on the AMA Veterans Committee meeting in Chicago, stating that the committee was trying to again become active at the state level to influence the administration of VA Hospitalization policy.

VI. Eugene Crawley reported on his attendance at the AMA Conference on Polio eradication. He reported that the conference proposed that AMA and its constituent societies spearhead a campaign to encourage everyone to be vaccinated for polio. Upon the motion of Richardson and Edwards, the report was approved and adopted and Crawley was commended for his interest and work on the program.

VII. John Watkins spoke to the Council to protest the treatment by the Legislative Committee of certain ophthalmologists who opposed the passage of H. B. 10 sponsored by the optometrists of the State. The Council requested Dr. Watkins and Dr. Calcote, who accompanied him, to discuss the problem with other ophthalmologists in Little Rock and throughout the State to attempt to agree on how this legislation should be treated.

VIII. Joe Shuffield introduced Mr. William Smith, president of the Arkansas Pharmaceutical Association, who introduced representatives of the

Pharmaceutical Association and Pure Food and Drug Administration. These gentlemen discussed a measure being introduced in the Legislature by them which would regulate the door to door sale of vitamins, drugs, and other medicines such as Nutrilite. Following this explanation, there ensued a general discussion of present law and proposed measures on the sale of drugs containing paregoric. Upon the motion of Kolb and Edwards, the Council voted to request the Medical Society Legislative Committee and attorneys to confer with a committee from the Pharmaceutical Association to agree on measures regulating such drugs.

IX. Provost Lawrason of the Medical School spoke on Senate Bill 88 having to do with allocation of admissions to the Medical School by Congressional Districts. He also brought to the attention of the Council H. B. 58 to create a vice president of the University in Charge of Medical Affairs. Upon the motion of Dalton and Kolb, the Council voted to instruct the Legislative Committee to oppose H. B. 58.

X. Upon the motion of Wade and Fowler, the Executive Secretary was directed to publish a bi-weekly Legislative Bulletin to keep the members informed of what was going on in the Legislature.

XI. Chairman Hundley informed the Council of Executive Committee decision to send a repre-

sentative to the AMA Veterans Committee meeting in Chicago and its action in directing the Executive Secretary to transfer an additional \$5,000 to the Medicare Fund of the Society for payment of claims under the program. Upon the motion of Kolb and Wade, the Council approved both actions.

XII. Mr. Schaefer gave a report on the progress of the Medicare Program, stating that the difficulties attending the initiation of the program were being overcome and that apparently the volume would be greater than had been anticipated by either the Department of Defense or the Medical Society.

XIII. Kolb discussed the small amount contributed to the American Medical Education Foundation by Arkansas physicians as compared to the money received by our medical school from the fund. He suggested that the Council and the Budget Committee consider a possible increase in State dues earmarked as a contribution to AMEF.

XIV. Dr. King Wade, Jr., notified the Council that the Garland County Society was having difficulty with a physician whom they did not wish to accept in membership.

The Council adjourned at 4:00 P.M.

/s/ Louis K. Hundley, M.D.,
Chairman.



RESOLUTION

DR. ROBERT CALDWELL

WHEREAS, an all wise providence has seen fit to remove from our midst, Dr. Robert Caldwell, who was our valued co-worker and a faithful member of the Pulaski County Medical Society, the Arkansas Medical Society, and the American Medical Association since 1911. We, the members of the Pulaski County Medical Society, mourn and deeply regret his sudden departure.

WHEREAS, as a Physician in his chosen field of Ear, Eye, Nose and Throat, he attained a great measure of distinction and won the respect and admiration of his colleagues, as well as the gratitude and love of a host of sorrowing people. Dr. Caldwell was Past President of Arkansas Medical Society and for a number of years was head of the department of E. N. T. at the University of Arkansas School of Medicine.

EVEN though he had reached the age of 80 years Dr. Robert Caldwell was still living a life of usefulness when a tragically unfortunate accident caused injuries that resulted in death.

AFTER he had applied himself with diligence and devotion to obtaining a medical education he entered practice at Little Rock. For almost half a century he labored here in the field of medicine for which he

had prepared himself in American medical schools and in European clinics.

WITH his unremitting work in his profession Dr. Caldwell found time for public service. Especially notable was his work with the State Hospital Board and the University of Arkansas Medical School. With his secular labors and his church and fraternal affiliations Dr. Caldwell lived a well-rounded life. He will be remembered for his contributions to human well-being as a dedicated physician and for his contributions to the social welfare of his fellowmen.

THEREFORE, be it resolved that the Pulaski County Medical Society express to his family the esteem in which he was held as a member of this Society and its heartfelt sympathy to the family at the untimely loss which it has sustained.

BE IT FURTHER RESOLVED that a copy of this resolution be made a matter of record in the minutes of the Pulaski County Medical Society; that a copy be sent to the family, and a copy to the Journal of the Arkansas Medical Society.

This resolution is respectfully submitted to the members of the Pulaski County Medical Society by your committee:

Dr. G. W. Reagan,
Dr. Joe Shuffield.



Medicine in the News

Dr. Albert J. Grobmyer, Jr., Memphis surgeon, has been named chief of the medical staff of the St. Joseph Hospital in Forrest City. He succeeds Dr. E. C. Campbell who has been chief of staff since 1945.

The **Hendrix College Pre-Med Club** has received a charter for establishment of a chapter of Alpha Epsilon Delta, national pre-medical honor society. Two national representatives made up the installation team when the Hendrix pre-med group joined the national society February 3. The Hendrix Pre-Med Club will be one of 68 chapters of Alpha Epsilon Delta at accredited colleges throughout the United States.

Tax Deferments—Identical bills by Reps. Jenkins (H. R. 9) and Keogh (H. R. 10) would permit the self-employed, including physicians, to annually deduct from adjusted gross income as much as 10% of net earnings or \$5,000, whichever is the lesser, when paid into retirement plans. Total set aside allowed during a taxpayer's lifetime could not exceed \$100,000; unused allowances could be carried over from earlier years. For persons between age 50 and 70, an additional 10% of net earnings for each year of age over 50 would be allowed. Another change from previous Jenkins-Keogh proposals is a provision to allow cash surrender before age 65 upon payment of a tax penalty.

Veterans—Chairman Teague (D., Tex.) of the House Veterans Affairs Committee has sponsored a bill (H. R. 58) tightening up admission procedures of veterans seeking VA hospitalization for non-service-connected disabilities. Present law permits hospitalization for such disabilities on a space-available basis when the veteran states he is unable to defray necessary medical expenses. The head of the VA now has the right to prescribe any type of admission form; Mr. Teague's bill would set down specific requirements.

The veteran would have to declare: (1) extent of any medical, surgical, hospitalization or health insurance and all annuities of

which he is a beneficiary, (2) all insurance policies on his life, (3) value of all real or personal property owned by him, (4) average monthly income during preceding 6 months, (5) average monthly expenditures, and (6) his net worth. The bill then provides that after reviewing these points with the veteran, the admission officer will read to the veteran the laws and the criminal code having to do with fines for making false affidavits or statements.

Educators Discuss Doctor Training

Chicago—Urgent questions in the training of young doctors now and in the future, and in helping practicing physicians keep up to date were discussed by medical educators in Chicago Feb. 9-11.

The 53rd annual Congress on Medical Education and Licensure were sponsored by the American Medical Association's Council on Medical Education, with the cooperation of the Advisory Board for Medical Specialties and the Federation of State Medical Boards of the United States.

Because there has been much concern over the training of doctors for general practice, the Sunday session concentrated on current education and on ideas about just what can be accomplished during four years of undergraduate medical school.

Dr. Edward L. Turner, secretary of the council, said the emphasis was on the immediate problem—1957 and the future—rather than discussion of what has been done so far.

Independence County has purchased the Allen Hospital in Batesville and will convert it into a rest home for aged and indigent persons.

Bids for construction were received January 29 for conversion of the government Free Bath House in Hot Springs, into a Physical Medicine and Rehabilitation Center. The project was first proposed in 1951 and it has been approved by the Hot Springs-Garland County Medical Society.

The contract for construction of Lee County's Memorial Hospital was let Monday, December 31. The total contract was for \$263,028.00. The contract calls for com-

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pletion in eight months which will mean that the building should be ready by September 1. Work has been started on the 28-bed hospital.

Work is underway on the Little River Memorial Hospital after contracts for the construction were signed December 27. The hospital will have a total of 30 patient beds. It will be one story of semi-fireproof construction, contemporary in design, year-round air-conditioned, and will be furnished with the latest in modern equipment.

A generalized clinic for the prevention and control of disease was opened Thursday, Jan. 3, and will be held each Thursday thereafter in the Jacksonville Elementary School. The Pulaski County Health Department, which will conduct the clinic, said hours will be 9 a.m. to 3 p.m.

Budget Drops Building Funds For Library of Medicine

The Budget Bureau, following up an administration ban against any new starts in federal buildings, has eliminated a construction item from the fiscal 1958 budget for the National Library of Medicine. However, the library has enough money on hand to go ahead with planning, and the architects continue their work. By next March plans are expected to be completed for presentation to the Department of Health, Education, and Welfare, preliminary to a formal request to the Budget Bureau later in the year for fiscal 1959.

Senator Bricker Introduces A New Treaty Amendment

Senator Bricker (R., Ohio) is renewing his efforts to protect domestic law against possible encroachment by treaties. He has presented a new version of a constitutional amendment, an earlier version of which was defeated in the Senate by a one-vote margin in 1954. Although Senator Bricker conferred with President Eisenhower before offering the new resolution, he did not indicate whether he had won the President over to the new provisions. It was largely through opposition of the President that the earlier proposal was defeated. The AMA supports the Bricker amendment in principle. The new version reads:

Section 1. A provision of a treaty or other international agreement not made in pursuance of

this Constitution shall have no force or effect. This section shall not apply to treaties made prior to the effective date of this Constitution.

Section 2. A treaty or other international agreement shall have legislative effect within the United States as a law thereof only through legislation, except to the extent that the Senate shall provide affirmatively, in its resolution advising and consenting to a treaty, that the treaty shall have legislative effect.

Section 3. An international agreement other than a treaty shall have legislative effect within the United States as a law thereof only through legislation valid in the absence of such an international agreement.

Section 4. On the question of advising and consenting to a treaty, the vote shall be determined by Yeas and Nays, and the names of the Senators voting for and against shall be entered on the Journal of the Senate.

Drugs for Heart Disease

The Public Health Service has announced a grant of \$575,000 to evaluate the effectiveness of drugs in treating heart disease. This is the largest research grant of its kind ever made by the National Heart Institute.

Congress Gets Budget: New Health Legislation Piles Up

President Eisenhower's budget now is before Congress. It calls for almost \$72 billion dollars — a record for peacetime and only one percent below the Korean war budget of 1953. The increase recommended for the Department of Health, Education, and Welfare is 23%, including 6% for Public Health Service. The budget last year called for a PHS increase of almost 10%, but before the appropriation bills got through Congress the increase was about 20%.

Meanwhile, members of the Senate and House are showing the expected avid interest in health measures. In the first seven legislative days they introduced 140 health-medical bills of sufficient significance to be followed by the Washington Office of the American Medical Association throughout the two years of the 85th Congress. This seven-day collection of 140—explained in part by the fact this is a new Congress and bills must be re-introduced—compares with a total of 571 bills followed through the two years of the last Congress.

The overall budget of the Department of Health, Education, and Welfare would be

increased about 23% to \$3,070,602,412 and that of the Public Health Service 6.5% to \$576,730,000. Some of the items:

Veterans Medical Care Resolution

At the House of Delegates session in November, 1956, two resolutions were adopted concerning the present practice of the Veterans Administration in providing medical care to veterans with non-service-connected disabilities who are covered by workmen's compensation or who have private medical insurance.

The portion of these resolutions dealing with workmen's compensation is particularly interesting and has been the subject of comment in the past by the A.M.A. Law Department.

In the cases in question the Veterans Administration has rendered treatment to injured veteran workers who are entitled to medical care without charge under state or federal workmen's compensation laws.

The basic federal law which provides for medical care for veterans is Public Law No. 2, 73rd Congress, as amended. Section 6 of this law provides that a "veteran who is in need of hospitalization . . . and is unable to defray the necessary expenses thereof . . . shall be furnished necessary hospitalization . . . in any Veterans Administration facility within the limitation existing in such facilities irrespective of whether the disability was due to service. The statement under oath of the applicant on such form as may be prescribed by the Administrator shall be accepted as sufficient evidence of inability to defray necessary expenses."

The question has logically been asked whether a veteran's hospital should admit a compensation claimant for treatment of a non-service-connected disability when he is not personally liable for the cost of such medical care. It seems obvious that the federal statute is intended to limit hospitalization benefits in non-service-connected cases to indigent veterans who must look to governmental or private charity for such services. When the veteran involved is not required to pay for hospitalization because he is entitled to such services by law (workmen's compensation claims), irrespective of his financial ability, then he should not be eligible for federal medical care.

Obviously, Congress intended to provide hospitalization to veterans with non-service-connected disabilities in a manner similar to the services offered by private charities. The workmen's compensation claimant is not in need of charity, and, therefore, a hospital administrator who provides medical care, having knowledge of such fact, may be violating the law.

Yellow Fever Vaccination Center

The Arkansas State Health Department has now been made a Designated Vaccination Center for the administration of Yellow Fever Vaccine.

The vaccine will be given at the State Health Department Building at 10:00 A.M. on Monday only, beginning January 7, 1957. This is a new service for the people of Arkansas, since heretofore persons required to take yellow fever vaccine for foreign travel had to get it out of the State.

Yellow fever vaccine has to be kept at below freezing temperature and after it is mixed for use is good for only about 30 to 60 minutes. Only one injection of this vaccine is required. It is for this reason that a definite time is set for administration. The vaccine is not available commercially.

The International Certificate of Vaccination must bear the stamp of a Designated Center. All other vaccinations required for foreign travel will be administered by local physicians or local health departments. Only yellow fever vaccine will be administered at the State Health Department.

AMA Studies Medical Care Payments for Indigents

A number of amendments which provide a new method of financing medical care for indigent persons receiving state Public Assistance aid were passed by the 1956 Congress. The AMA Council on Medical Service's Committee on Indigent Care has studied the changes these amendments make in state and local indigent care plans and prepared a question-and-answer survey for distribution to state medical societies. The Committee's "guides" for indigent care plans also have been brought up to date for state society use.

After July 1, 1957, the federal government will reimburse the states on a 50-50

basis for medical care expenditures. The federal Bureau of Public Assistance pays half the amount expended in any program which meets its standards, up to an average of six dollars per month for adults and three dollars per month for children. The Bureau is attempting to encourage expansion of the medical care benefits available after July 1, when the new system of financing takes effect.

AMA Rural Health "Derby" March 7-9

The Blue Grass country of Louisville, Ky., will be the scene of the American Medical Association's rural health "derby" March 7-9. Sponsored by the Council on Rural Health, this 12th National Conference on Rural Health will be held at the Brown Hotel. It will feature discussions on various problems of rural health and medical care. It is built around the theme of "Together We Build."

Plan Medicolegal Symposiums in March

During the fall of 1955 the American Medical Association for the first time sponsored a series of three regional medicolegal symposiums at Chicago, Omaha, and New York City. Plans have just been announced for another series of such meetings. They will be held on March 15-16, 1957, at Atlanta, Georgia; on March 22-23, at Denver, Colorado, and on March 29-30 at Philadelphia, Pennsylvania.

Administration Announces Medical-Welfare Aims

As Congress opened, the Eisenhower Administration, through Secretary Folsom, announced part of its medical-welfare program for this year. The major points are: 1. A new law to authorize \$250 million in grants (over five years) to help pay for new construction and equipment for medical, dental, and public health schools. 2. Stepping up the federal-state rehabilitation program along three lines—more special project grants (where U. S. pays full cost), increased efforts for the professional training of more rehabilitation workers, and "strong assistance" to states so they can extend and improve their own rehabilitation operations. 3. More effort and money for Indian health care, including a request of Congress (turned down last ses-

sion) for \$29 million for sanitary facilities. 4. More attention to research in the basic causes of poverty and dependency, and more state grants to help in professional training of social workers.

Medical Ethics in Time of War

"Medical ethics in time of war is identical with medical ethics in time of peace, as established in the International Code of Medical Ethics of The World Medical Association. The primary obligation of the doctor is his professional duty; in performing his professional duty, the doctor's supreme guide is his conscience!"

New Grants

Fourteen new grants, for a total of \$78,100.00 to American universities and research institutions throughout the country will augment the extensive program of clinical and laboratory research in the fields of vitamins and nutrition of The National Vitamin Foundation, Inc.

Dr. Carl D. Douglass, University of Arkansas, Little Rock, Arkansas; \$3,500.00 for studies on the fate and possible role of bioflavonoids in animal metabolism.

Health Bills Showing Up In Opening Stages of Congress

The 85th Congress appears to be running true to form. Judging from the bills introduced in the opening days of the first session, health remains a popular subject with legislators. Out of a record first-day flood of some 2,000 bills and resolutions in the House. Introduction of bills began a few days later in the Senate.

Special Report From AMA Washington Office

The administration again is asking Congress to authorize construction grants for medical, dental, public health and osteopathic schools. The money would be used to help pay for facilities for more students rather than for salaries of teachers or for maintenance costs.

Interest has been revived in the Jenkins-Keogh plan for permitting the self-employed to defer payment of taxes on money paid into retirement plans. The American Bar Association is pushing for

enactment of a bill this session, and has reported that more than half of the members of the House favor the principle of tax deferment for self-employed. Supporters of the proposal (which include the American Medical Association) point out that enactment of the plan would place professional groups on a par with employed persons. Industry now is permitted to deduct money paid into annuities.

Both the administration and the Democrats are working on ways to bring about more rapid expansion of health insurance. The administration's reinsurance plan, twice rejected by Congress, remains in the background. Coming to the fore this year is a substitute plan which would permit smaller insurance companies (the larger ones say they don't need it) to pool their resources without violating anti-trust laws.

Some of the more optimistic officials concerned with getting a program of contributory, voluntary health insurance underway for federal civilian workers feel it can be accomplished this year. Certainly no single proposal in the health field in recent years has been worked over for so long a period.

The 6-year-old doctor draft act expires this July 1, and barring any new emergency, the Defense Department says it will not ask Congress to extend it.

If this Congress runs true to form, there will be an abundance of bills designed to further liberalize the much-amended Social Security Act.

Even if this session of Congress were to enact no new health legislation, it still would have to vote large sums of money to maintain health, medical and welfare programs already in existence. Congress in all likelihood will be asked to appropriate at least the same amount voted last year. In the Department of Health, Education, and Welfare, for instance, Congress in 1956 approved over \$772 million for health programs and some \$1.3 billion for public assistance payments.

Many Students Enter Medical School With "C" Average

Chicago—You don't have to be a "brain" to get into medical school.

A recent report by the American Medical Association shows that 13.6 per cent of the

students who entered the nation's 76 approved four-year medical schools during the 1955-56 academic year had a "C" college grade average.

Over a six-year period, 70.6 per cent of the entering students had a "B" average while, over the same period, only about 15.8 per cent of the entering classes had the enviable "A" average.

"College academic achievement as measured by scholastic records is only one factor among many utilized in the selection of medical students," the report said.

Army To Run Medical Equipment Development Laboratory

The development of medical supplies and equipment for the armed services became the responsibility of the Army Surgeon General January 1, 1957, the Department of Defense announced.

Since 1946 this has been a joint operation, responsibility for its direction rotating among the three services.

Most of the work at the Laboratory is concerned with the design of new or the re-design of existing medical equipment. The Laboratory's machine shop is equipped to fabricate prototype models on any item of field medical equipment.

Physicians' Committees Considered In Disability Program

A recommendation of the Indiana State Medical Association is under consideration by the Social Security Administration. It would establish district or county committees of physicians to review individual doctors' medical findings under the new law providing O.A.S.I. payments to disabled at age 50. The committee would review the physician's report, further examine the applicant if it so desired, and be authorized to file the final report of impairment determination and make recommendations as to whether the report might be reversible by medical or other rehabilitative measures.

"Home Care" Information Available From AMA

Because of increased interest among medical societies in organized "home care" programs—such as the one inaugurated by Montefiore Hospital (New York) several

years ago—the AMA's Council on Medical Service recently undertook a study of existing programs throughout the country. The new study includes information on the organization, development, financing, medical services provided, and problems encountered in the various home care programs. Any medical society desiring further information should contact the Council.

World Medical Association

One of the basic objectives of W.M.A. is to promote world peace, through sharing our professional progress and problems. This we are pledged to do by action taken by The World Medical Association at its recent General Assembly. A program was approved, providing for promotion of mutual exchange visits of foreign doctors and distinguished medical teachers; establishment by member national medical associations of "International Visitors' Bureaus" to aid physicians in visiting hospitals, medical schools, and local physicians in their homes, visits to the annual meetings of other national medical associations; holiday exchange visits by doctors and their families; and exchange programs of medical journals and textbooks; magazines and other cultural media. The next assembly will be held in the world's "oldest and newest city," Istanbul, Turkey, where Europe and Asia meet. The date is September 29 to October 5, 1957.

Preventive Medicine Residency Program Established By Army Medical Service

The Army's first formal residency training program in preventive medicine will begin July 1, 1957, according to an announcement by the Army Surgeon General's Office, Washington, D. C.

Regular Army Medical Corps officers or qualified civilian physicians who accept commissions in the Regular Army are eligible to participate in this program, according to the announcement.

Army Publishes First Volume of World War II History of Orthopedic Surgery

Orthopedic injuries — injuries to the bones and joints—made up the largest single group of casualties in World War II, Army Surgeon General Silas B. Hays points

out in a foreword to the first volume of the Army Medical Service's history of orthopedic surgery in World War II.

AMA Studies Uniform Chemical Labeling Law

A program to protect the public from the dangers of mislabeled household and commercial chemicals recently was launched by the American Medical Association. Through its Committee on Toxicology, the AMA is gathering information on existing state labeling regulations with the idea of developing model legislation on the precautionary labeling of various chemical products.

Nation To Observe "Medical Education Week" in April

Attention of the nation will be focused on the achievements of U. S. medical schools during Medical Education Week, April 21-27.

AMA Schedules "Nomenclature" Institutes in 1957

Plans have been announced by the American Medical Association to conduct two—and possibly three—short courses on the use of the **Standard Nomenclature of Diseases and Operations** during 1957.

FDA Warns Cancer Patients On Hoxsey Treatment

Following action of a federal court at Pittsburgh in denouncing the Hoxsey medicines, the U. S. Food and Drug Administration has warned all cancer patients and their families that the "menace" of the "fake treatment" still continues.

FDA Administrator George P. Larrick said his agency will seek an injunction to stop further interstate shipment of the pills.

Aid to Hungary

Dr. Louis H. Bauer, Secretary General of The World Medical Association announced today that he had wired the United Nations urging that body to insist on the admission of all needed aid to Hungary in its present tragic situation as a result of the ruthless butchery and strangling of the spirit of freedom.

Six States Produce Most Medical Students

Chicago—Forty per cent of all first-year students in the nation's 76 approved four-year medical schools come from six states: New York, Pennsylvania, California, Ohio, Illinois and Texas.

THE MONTH IN WASHINGTON

Washington, D. C.—The broad issue of federal construction grants for medical schools pending before the 85th Congress raises again a major question: To what extent is there a physician shortage in the United States?

The administration, through Secretary Folsom, maintains that the need for more doctors and research scientists is increasing rapidly as the population rises, as medical science grows more complex and as research programs are greatly expanded. And, he adds, the need undoubtedly will continue to increase in the years ahead.

Many of these schools already are in a critical financial plight, Mr. Folsom argues, and they need increased private and public funds "just to meet regular operating expenses." Under these circumstances, without further aid, "many schools face almost impossible obstacles in raising funds for construction of new classrooms, laboratories and other facilities." The Secretary then sounds this warning:

"Unless effective action is taken now toward providing these facilities, the shortage of medical scientists will grow much more acute in the years ahead, and the health of the American people will be retarded."

To solve this problem, the administration wants to broaden the program enacted last year for \$30 million a year for three years to help build and equip laboratories doing research in various diseases. It asked the last Congress for \$50 million a year for five years for both research labs and teaching facilities. The legislators only granted the \$30-million-a-year part. That, says the administration, is not enough.

One of the few surprises in the opening day rush to the bill hoppers was a bill Rep. Poage (D., Tex.) to authorize the Secretary of HEW to make long-term, 3%-interest

loans to non-profit hospitals for construction and expansion of facilities, including nurses homes.

Announcements

Dallas Southern Clinical Society To Hold Annual Spring Conference March 18, 19, 20

Eighteen distinguished out-of-state guest speakers will provide up-to-date information in practically all fields of medicine at the 26th Annual Spring Clinical Conference of the Dallas Southern Clinical Society to be held at the Statler Hilton Hotel, Dallas, Texas, March 18, 19, and 20. In addition, twenty-four postgraduate lectures will be presented.

Doctor-Lawyer Meeting Scheduled For Atlanta

The American Medical Association has invited doctors and lawyers in the South and Southeast to a medicolegal symposium in Atlanta, Ga., March 15 and 16.

One of a series of three such symposiums to be held during March in various sections of the United States, the Atlanta symposium will feature such subjects as trauma and disease, medical expert testimony and the medical witness. In addition, a mock trial demonstration will take up the introduction in court of chemical tests for intoxication.

Pan American Ass'n of Ophthalmology Announces Program of Spring Congress

Symposiums on three officially selected subjects will be a leading feature of the program of the Fourth Interim Congress of the Pan American Association of Ophthalmology, which is to be held in New York City, April 7-10, in joint session with the National Society for the Prevention of Blindness. Headquarters will be at the Hotel Statler.

Scientific Exhibit

Anyone interested in having a scientific exhibit at the next annual meeting of the State Medical Society should write Lawrence M. Zell, M.D., 937 Donaghey Building, Little Rock, Arkansas.

Medical Program Combines With South Dakota Pheasant Hunting

The Hunter's Fall Medical Meeting sponsored by the South Dakota State Medical Association will be held at Mitchell, South Dakota, during the first five days of pheasant hunting season in October, 1957.

The program is set up for out-of-state doctors and will feature morning scientific sessions, afternoon hunting and evening scientific and social sessions.

The registration fee is set at \$100.00 which will cover the out-of-state hunters license, hunting guides, reserved hunting areas, several social events, and the scientific program. Motel and hotel space has been reserved, but registration is limited to the available housing.

The affair is not stag, but wives who hunt must pay the full registration fee and those not hunting, three-fourths of it. (This is necessitated by the tight housing situation.)

For details and reservations write to Mr. John C. Foster, Executive Secretary, South Dakota Medical Association, 300 First National Bank Bldg., Sioux Falls, South Dakota.

Refresher Courses at the Children's Hospital of Philadelphia in May and June, 1957

1. **Pediatric Advances for Pediatricians and General Practitioners.** May 27 through May 31, 1957. Conducted by the Staff of the Children's Hospital of Philadelphia, in collaboration with the Department of Pediatrics of the University of Pennsylvania and the Staff of the Camden Municipal Hospital. Tuition—\$110.00.
2. **Practical Pediatric Hematology.** June 3, 4 and 5. Conducted by Irving J. Wolman, M.D., and other members of the Hematology Department of the Children's Hospital, under the auspices of the Graduate School of Medicine, University of Pennsylvania. Tuition—\$75.00.
3. **Blood Group Incompatibilities and Erythroblastosis Fetalis.** June 6 and 7. Conducted by Neva Abelson, M.D., and Thomas R. Boggs, Jr., M.D., of the Philadelphia Serum Exchange of the Chil-

dren's Hospital of Philadelphia, under the auspices of the Graduate School of Medicine, University of Pennsylvania. Tuition—\$50.00.

Inquiries should be addressed to Irving J. Wolman, M.D., Children's Hospital of Philadelphia, 1740 Bainbridge Street, Philadelphia 46, Pa.

Advances in Venereal Diseases

The eighth Annual Symposium on Recent Advances in the Study of Venereal Diseases will be held in the auditorium of the Department of Health, Education, and Welfare, Washington, D. C., on April 24-25, 1957.

Meeting of Obstetricians and Gynecologists

The Fifth Annual Interim Meeting of District VII of The American College of Obstetricians and Gynecologists will be held at the new Statler-Hilton Hotel, Dallas, Texas, April 12-13, 1957.

Treatment of Rheumatic Disorders

A course on the Orthopedic Aspects of the Treatment of Rheumatic Disorders will be given for the first time by the New York University Post-Graduate Medical School for three successive Thursdays, from March 19 through April 2.

Regional Meeting of the American College of Gastroenterology

A regional meeting of the Central Region of the American College of Gastroenterology will be held in Grand Rapids, Mich., Sunday afternoon, 17 March 1957. The Scientific Sessions will be at the Hotel Pantlind commencing at 1:45 P.M.

Cardiology

Two intensive review courses in cardiology for general physicians and internists are being offered by the New York University Post-Graduate Medical School on a full-time and part-time basis during April and May, 1957.

For further details write: The Dean, Post-Graduate Medical School, 550 First Avenue, New York 16, N. Y.

PROCEEDINGS OF SOCIETIES

The Pulaski County Medical Society announces the following programs for 1957. All members of the Arkansas Medical Society are invited to attend.

January 8, 1957—

Dermatoglyphics—Dr. Harold Cummins

February 5, 1957—

Legislation Affecting Medicine—
Dr. John McDonald

March 5, 1957—

Tax Problems of the Physician—
Charles Eichenbaum

April 2, 1957—

Program at the Air Base—Lt. Col. Kennett

May 7, 1957—

Social Security—Mr. Joseph Stetler

June 4, 1957—

Symposium on Civil Defense—
Brooke Army Medical Center

September 8, 1957—

Medicine and the Law—
Film with comments from an A.M.A. Representative

October 1, 1957—

The Physician and Narcotics—
Agent in charge Narcotics Division—
Secret Service

November 1, 1957—

Economic Problems of the Physician—
J. H. Bowen

December 3, 1957—

Election Meeting and Business

January 17, 1958—

Arkansas Industrial Development Council

The Annual Sebastian County Medical Society Banquet was held January 9, 1957, 7:00 P.M., at the Hardscrabble Country Club, Fort Smith, Arkansas, with an outstanding attendance of approximately 200 area doctors.

Installation of officers for the coming year was held at this time:

President—Art Martin, M.D.

Vice President—Merle Woods, M.D.

Secretary—George W. Allen, M.D.

Treasurer—Don Meador, M.D.

The guests of honor and speakers were Dr. Masauki Hara, Department of Thoracic Surgery, University of Arkansas, and Dr. James S. Taylor, Associate Professor, Uni-

versity of Arkansas Medical School, who discussed new developments in the field of cardiology in the past year.

The regular meeting date of the Sebastian County Medical Society will be the second Tuesday of each month; dinner meetings are planned, and any members of the State Society who are in our area and wish to be present will be most welcome. Reservations for them can be made by contacting the secretary.

December, 1956—

Contributions to American Medical Education Foundation from Arkansas:

Dr. Eldon Fairley, Wilson	\$25.00
Dr. A. M. Grasse, Calico Rock	50.00
Dr. J. L. Rosenzweig, Hot Springs	20.00
Dr. Carl L. Wilson, Fort Smith	25.00
Dr. Carl L. Wilson, Fort Smith	25.00
	<hr/>
	\$145.00

Members from the Sixth Councilor District met at the Little River Country Club, Horatio, Ark., Thursday night, January 10th. The legislators from the district were invited to the meeting. Following a spaghetti supper served by chefs, John P. Wood and R. C. Dickinson, the meeting was opened by introducing the guest speaker, Dr. Joe Shuffield, Little Rock, chairman of the Legislative Committee. Dr. Joe presented a graphic, comprehensive picture of the problems and needs of our new medical center, along with a discussion of other medical legislation presented to the legislative session. The guest legislators, including Senator Riales, Mena, Ark., and Senator Gene Lee, Prescott, Ark., gained a clearer understanding as a result of the meeting. Representatives Winfred Lake, DeQueen; Landers L. Morrow, Mena, and Pete Austin, Daisey, were also unanimous in their desires to be of assistance to the medical center and the Arkansas Medical Society.

The Polk County Medical Society met December 17th, at the Polk County Memorial Hospital. Guest speaker was Dr. Roger Bost, Fort Smith. Officers elected were Dr. Frank A. Lee, Vandervoort, President; Dr. C. A. Campbell, Mena, Vice President; Dr. John P. Wood, Mena, Secretary and

FEATURES

Treasurer; Dr. L. K. Williams, Mena, Delegate; and Dr. Pierre Redman, Mena, Alternate Delegate.

New officers elected by the Baxter County Medical Society are: Dr. James C. Dunbar, President; Dr. John Guenther, Vice President; Dr. Walter S. Guinee, Secretary-Treasurer; Dr. Ben N. Saltzman, Delegate to the state convention; and Dr. Seldon W. Chambers, delegate to the rural health conference.

The Sebastian County Medical Society and the Arkansas Heart Association invited about 200 doctors to attend a Heart Institute meeting in Fort Smith, January 9th. Dr. Richard Ebert and Dr. Masauki Hara, both of the University of Arkansas Medical Center, addressed the meeting.

Dr. Harold Cummins, professor of anatomy at the Medical School of Tulane University and an editor of professional journals on anatomy, spoke to the Pulaski Coun-



The above is a recent group picture of the elder members of the Washington County Medical Society. They are all lifetime honorary members of the society. Nearly all of these doctors—if not every one—have been in practice 50 years or more. 500 years of medical service! Dr. Ellis, who is the acknowledged “unofficial” Dean of our profession there has been in active practice about 71 years. He still works daily in his office, but being 95 years old and not in robust health, naturally does not try to do very much.

Drs. Bloom, Gordon, Harrison and Wozencraft are retired, but the others pictured are all still in active practice.

FRONT ROW—Left to Right:

1. Dr. W. H. Mock, Prairie Grove
2. Dr. E. F. Ellis, Fayetteville
3. Dr. A. J. Harrison (framed photo), Springdale
4. Dr. P. L. Hathcock, Fayetteville

BACK ROW (Standing)—Left to Right:

5. Dr. F. N. Gordon, Fayetteville
6. Dr. W. L. Wozencraft, Fayetteville
7. Dr. R. H. Huntington, Fayetteville
8. Dr. W. A. Fowler, Fayetteville
9. Dr. C. F. Bloom, West Fork

ty Medical Society at its meeting, January 8th. Dr. Cummins, who also is an authority on fingerprints, spoke about skin markings of the hands as signs of medical constitution.

The Craighead-Poinsett County Medical Society heard Dr. R. C. Hooper of Jonesboro discuss "Trauma of the Genitourinary Tract" and "Dyes Used in Treating Urological Diseases" at their regular meeting in Jonesboro January 9th. During the business meeting which followed, the Society endorsed the Auxiliary's efforts in encouraging high school students to enter the essay contest sponsored by the American Association of Physicians and Surgeons.

Approximately 65 attended the Mississippi County Medical Society meeting held at the Seminole Club, January 8th, in Osceola, when the South Mississippi County doctors entertained with a duck dinner. Dr. L. D. Massey was in charge of the program. The Osceola barber shop quartet presented several musical numbers. Ray Morgan, Dane Fergus and Ralph Wilson presented a symposium on estate planning, gift taxes and inheritance taxes. At the conclusion of the program a movie was shown of a Caribbean cruise. Dr. W. J. Sheddan was in charge of food.

Hostesses at the Independence County Medical Society and Auxiliary dinner held at the Marvin Hotel, Batesville, in January were Mrs. C. G. Hinkle, Mrs. F. Q. Wyatt and Mrs. O. J. T. Johnston. Following dinner the medical society held their business meeting at the North Arkansas Clinic. The auxiliary adjourned to the home of Mrs. C. A. Churchill for their meeting.

Mr. Paul C. Schaefer, Executive Secretary of the Arkansas Medical Society, was guest speaker for the January meeting of the Ouachita County Medical Assistants at the Medical and Surgical Clinic in Camden. His subject was "Medicare." Special guests at the meeting were members of the Ouachita County Medical Society, the Union County Medical Society and the Union County Medical Assistants Society.

The Columbia County Medical Society met February 14th and inducted new mem-

bers as follows: Dr. Charles Kelly, Magnolia; Dr. John Ed Alexander, Magnolia, and Dr. U. A. Garred Sexton, Waldo.

The program was presented by Dr. Kenneth R. Duzan of El Dorado who reported on a case of Lung Abscess and a case of Bulbar Polio.

Dr. H. K. Carrington has retired from active practice; his clinic has been purchased by Dr. E. G. Burt.

PERSONALS AND NEWS ITEMS

The Hamilton Clinic in West Memphis has announced the association of **Dr. C. W. Peebles, Jr.** Dr. Peebles formerly lived in West Memphis.

Dr. David Hamilton James, Jr., has opened his office at Crittenden Memorial Hospital in West Memphis for the practice of pediatric medicine.

Dr. John P. McAlister, Medical Director, National Fireworks Ordnance Corporation, in Camden, has been presented a letter of appreciation by Capt. John A. Edwards, USN, for the whole-hearted cooperation and generous assistance of himself and his associates to the Navy hospital corpsmen in administering the medical program at that station.

At the regular monthly meeting of the Springdale Memorial Hospital medical staff, **Dr. John R. Power** was elected Chief of Staff. **Dr. R. P. Edmondson** was named vice-chief and **Dr. John Dorman**, secretary-treasurer.

With characteristic benevolence, **Dr. Robert Caldwell** who died from injuries sustained in a car accident in Little Rock, remembered Arkansas institutions in his will. He bequeathed a total of \$17,000 to Hendrix College, College of the Ozarks, Mt. St. Mary's Academy, St. Vincent Infirmary and the Arkansas Children's Hospital.

Dr. Robert W. Ross, Little Rock gynecologist and obstetrician, has moved his offices from the Donaghey Building to Suite A, 4316 West Markham Street.

Woman's Auxiliary

The Garland County Medical Auxiliary was entertained in December by the wives of the Medical staff of the Army and Navy Hospital. The affair was held in the Officers Club in Hot Springs, with the president, Mrs. Ion Reed, in charge. Mrs. Martin Eisele, program chairman, introduced Mrs. Frank Tarleton, Jr., and Mrs. Helen Fitcher, who presented a musical program.

The Auxiliary to the Hot Spring County Medical Society held its January meeting with Mrs. Bruce Kersh, Malvern. At the business session led by the president, Mrs. John Cole, the auxiliary voted to give a tea for the senior girls of the Malvern High School in order to promote interest in the nursing profession.

The Boone County Medical Auxiliary met for its January session at the Hotel Seville in Harrison. Mrs. William Barron, president, presided. Eleven members and one guest, Mrs. M. J. Kilbury of Little Rock, whose husband addressed the staff doctors of the Boone County Hospital, were present. All members participated in a discussion on "Safety."

Craighead-Poinsett and Greene-Clay Counties Auxiliaries honored members of the State Nurses Association with a tea in October when the nurses met in Jonesboro for their state meeting. Mrs. David S. Levine is president of Craighead-Poinsett Auxiliary, and Mrs. Donald T. Purcelle is president of Greene-Clay Auxiliary.

A check for \$933.44 was presented to the Davis Hospital Charity Fund by Mrs. Walter Wilkins, president of Jefferson County Medical Society, most of the amount being proceeds from their fall style show held last October at the Hotel Pines in Pine Bluff. The Charity Fund, which is maintained by individual contributions, memorials, and proceeds from benefits, was established by Jefferson County Auxiliary in 1951 for the care of indigent patients.

A picture appearing in the Northwest Arkansas Times, Fayetteville, Saturday, October 27, 1956, showed five-year-old Vicki Ann Mashburn, daughter of Dr. and Mrs. James Mashburn of Fayetteville, asleep in a dentist's chair in a local dentist's office. While the Times photographer, who just happened to drop by the dentist's office, was maneuvering his camera to take the picture of Vicki, her sister Deborah, age three, fell asleep in the other chair.

"The Advantages of Private Medical Care" and "The Advantages of the American Free Enterprise System" are the topics for the 1957 AAPS Essay Contest for high school students. This year's contest, as in former years, is sponsored by the Association of American Physicians and Surgeons Freedom Programs, Inc., with the cooperation of state and county medical societies and auxiliaries. This is the eleventh year for the contest. First prize is \$1,000. An Arkansas boy, from Pulaski County, placed last year in this contest. The contest has been approved by the Auxiliary Advisory Board. You will probably hear more about the contest through your local auxiliary. Prizes will be awarded to writers of the best essays regardless of their choice of subject.



TUBERCULOSIS ABSTRACTS*

Sponsored by
The Arkansas Tuberculosis Association

General Hospital Admission X-rays

By James M. Blake, M. D., and Kencil L. Mitton, M. D., New York State Journal of Medicine, October, 1956.

The discovery and isolation of the unknown cases of tuberculosis has been and continues to be the primary objective in the control of this disease. This objective will become increasingly important as the death rate and morbidity rate decline.

The population may be divided into four groups for the purpose of detecting significant cases of tuberculosis:

1. Those patients who visit their physicians because of symptoms of disease in the lungs. This is by far the most important group not only because of the higher incidence of tuberculosis among them, but also because if tuberculosis is the cause of their symptoms, they already are spreaders of the disease.
2. Patients admitted to general hospitals. The symptoms of pulmonary disease and the presence of disease in the lungs may or may not have been the reason for admission to the hospital. The presence of pulmonary disease may merely have been coincidental. These individuals are frequently symptomatic and under the observation of a physician. They are second in importance to the first group only from the point of view of classification.
3. Those individuals who have close contact with a known case of active tuberculosis.
4. The apparently healthy individuals.

This discussion is concerned with the routine admissions to general hospitals. Group studies on the prevalence of tuberculosis in general hospital admissions up to within the last two years have shown X-ray evidence of tuberculosis in from 2.8 to 8.1 per cent of the patients admitted. Of this group the presence of active tuberculosis has varied from 0.6 to 1.8 per cent. These studies have shown further that active tu-

berculosis in individuals X-rayed on admission to general hospitals has been from two to six times as productive in the yield of significant tuberculosis as have other types of mass X-ray examinations.

● A review of the admission X-ray program at Ellis Hospital (Schenectady, New York) demonstrated the value of this procedure. Admission chest X-rays should be routine in general hospitals since they aid in discovering more unknown disease than other routine admission examinations. The value of admission X-rays to the physician is in direct relationship to utilization and interest. The follow-up study is an important part of the program.

The detection of infectious, active tuberculosis and the isolation of the patient in the general hospital is of significance from many points of view. The protection of the hospital personnel by the proper isolation of the patient is obvious. The contributions to the care of the patient in the demonstration and discovery not only of tuberculosis but of nontuberculous diseases of the chest and cardiovascular system are also important. The admission X-ray is of greater value than are many other routine laboratory procedures. It has been demonstrated in various studies that clinically significant abnormalities of the chest are found in from 10 to 15 per cent of all patients examined.

The normal practice of most physicians today is based on routine examinations. Blood count, urinalysis, Wassermann, history, and physical examinations are basic procedures in evaluating the patient's problem. The admission chest X-ray has become a part of the program of more progressive general hospitals. One might say another routine examination is provided the patient and the physician as part of the first day's admission fee.

The significance and the value of the admission X-ray to the physician is in direct relationship to his utilization and interest. It is not infrequent to observe patients having multiple examinations to determine the diagnosis when the answer is photogradi-

FEATURES

cally inscribed on the photoroentgenogram on the back of the chart.

There perhaps has been some reluctance in reference to the photoroentgenogram X-ray, based on opinions that the so-called small film is not entirely satisfactory for diagnosis. Certainly, one would not wish to make a final evaluation based on the small X-ray, but the error is usually on the side of safety. The value of an X-ray examination is limited entirely to the interpretation which is placed on the shadows in that X-ray and the aid they give in guidance to other examinations and treatments.

The admission X-ray program at Ellis Hospital was one of the earliest established in New York State, having been instituted in 1947. A comparative study between the first full year of operation of this program and the last completed year of service, 1948 to 1954 is shown in Tables I and II.

TABLE I.—Ellis Hospital Admission X-rays

	Year	
	1948	1954
Number of adult admissions	11,487	11,281
Number of admissions X-rayed	8,734	8,641
Per cent of admissions X-rayed	76	76
Total X-rays	11,039	11,621
Diagnosis of admission X-rays by X-ray department		
Total abnormal diagnoses		
Number	1,599	1,452
Per cent	14.4	12.4
Total nontuberculous diagnoses		
Number	1,259	1,248
Per cent	11.4	10.7
Total active tuberculosis diagnoses		
Number	158	82
Per cent	1.4	0.70
Total inactive tuberculosis diagnoses		
Number	182	122
Per cent	1.6	1.04

These comparative statistics would seem to confirm observations of the declining incidences of tuberculosis. It is hoped that this tendency will continue until the disease is no longer of major concern. However, until the problem of immunity in tuberculosis is solved, the search for persons with unknown tuberculosis and the supervision of spreaders of tuberculosis will continue to be the safeguard for keeping the death rate and the morbidity rate at a minimum.

The discovery of tuberculosis in mass surveys of the general population, in contrast to selected groups such as general hos-

TABLE II.—Follow-up Study of Admissions Diagnosed Active and Inactive Tuberculosis in Relation to Total Number X-rayed

Diagnosis	Year	
	1948	1954
<i>ACTIVE TUBERCULOSIS</i>		
Active tuberculosis		
Number	40	4
Per cent of total X-rayed	0.35	0.03
Inactive tuberculosis		
Number	35	8
Per cent of total X-rayed	0.32	0.06
<i>INACTIVE TUBERCULOSIS</i>		
Active tuberculosis		
Number	2	1
Per cent of total X-rayed	0.01	0.008
Inactive tuberculosis		
Number	126	61
Per cent of total X-rayed	1.14	0.52

pital admissions, calls for the examination of more and more individuals to find a single case of significant tuberculosis. This has reached the point today of almost insignificant yield. The search for tuberculosis in the future must be more selective than it has been in the past. As the incidence of tuberculosis declines and ambulant treatment of tuberculosis increases, the responsibility of the family physician in the control of tuberculosis becomes greater. Likewise, the general hospital will have to assume greater responsibility for this program in its community.

The follow-up study of tuberculosis and other diseases of the lungs detected by such examinations is perhaps the most important phase of the program. The patients involved are under the care of their family physicians and he is responsible for the follow-up study. More and more hospitals are accepting chest X-ray programs as an established procedure which has significance both to the physician and to the patient in arriving at a diagnosis. A serious argument for the establishment of such programs is the physicians' responsibility for follow-up evaluation. This is particularly important when the growing rate of malpractice suits is considered.

Failure to use the X-ray at all, or failure to make sufficient use of the X-ray, has been the chief allegation in many malpractice actions. It seems reasonable, therefore, to point out that failure to give routine X-ray on hospital admissions may in the not too distant future be considered negligence.

BOOK REVIEWS

Dictionary of Poisons: Ibert and Eleanor Mellan.

Philosophical Library, New York. Pp. 150. \$4.75.

This book is recommended for lay reading by any individual who might be called on to perform first aid. The information contained in it would be helpful to have in every household as there is always the potential possibility that someone might accidentally ingest a poison. The book describes most of the common poisons and the emergency first aid treatment for them. It stresses the fact that in almost every case, a physician should be called. This book is not in sufficient detail to provide a valuable reference for physicians and is, therefore, not recommended for them.—A.K.

Principles of Clinical Electrocardiography: Mervin J. Goldman, M.D. Lange Medical Publications.

Los Altos, Calif. Pp. 310. 1956. \$4.50.

This paper bound volume of 310 pages by Dr. Goldman is confined entirely to the teaching of electrocardiography. It contains excellent diagrams which are carefully correlated with electrocardiographic tracings. In fact, the book is made up of a series of diagrams and illustrations. There is continuity of the text but the emphasis is on the illustrative material. This book has good coverage of the various aspects of electrocardiography. This book is recommended as a textbook of electrocardiography.—A.K.

LETTER TO EDITOR

4 January 1957

L. Holmes Ginn, Jr.
Surgeon, Fourth Army
Fort Sam Houston, Texas

Dear General Ginn:

Please accept my sincere thanks for your cordial letter of December 20 addressed to me as President of the Arkansas Medical Society. We will, indeed, have a closer relationship between civilian physicians and medical personnel in the Armed Forces since the implementation of Medicare and we feel that cooperation between the two groups is off to a flying start in Arkansas. Mr. Paul Schaefer, our Executive in Arkansas, has his office set up and working and he will be focal point for any conferences we might have.

The physicians of Arkansas have responded splendidly to the needs of Medicare and will cooperate fully.

Sincerely yours,

Fount Richardson,

President Arkansas
Medical Society



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Viruses; Man's Variable Associates

E. LLOYD WILBUR, M. D.*

One X-ray plus one harmless virus could equal several million deaths. This statement may sound fantastic, but it is a logical conclusion based on the known facts about viruses.

Viruses have two outstanding characteristics which have long made them puzzles and poorly understood entities. In the application of our knowledge of viruses both of these characteristics are related to immunity. Creation of an immune state in man, that will protect him against a virus infection is dependent on the formation of specific antibodies. The specificity of antibodies against an antigen is a stereochemical phenomenon based on specific morphological characteristics of the chemical compounds forming the antigen and its corresponding antibody.

Immunity to virus resides mainly in antibodies built up by the host. The virus particle is susceptible to attack by antibodies only in its extracellular phase. Once the virus enters a cell it cannot be neutralized by antibodies. While in the cell the virus multiplies several fold or several hundred-fold and this reproduction may produce so many virus particles that all the host antibodies are neutralized and the host is then defenseless.

The first outstanding characteristic of viruses is the ability to mutate. Although a virus particle is an extremely small entity, it has several fractions. (1) (2) (3) One of the fractions serves as an antigen. This antigenic fraction causes the formation of specific antibodies. Any substance or force that is capable of producing a mutation is capable

of altering to some extent the antigenic property of a virus. Mutations may be produced by nitrogen mustard, by X-ray, ultraviolet rays, and undoubtedly by other forces not now recognized. Any mutation that would change the configuration of the antigenic portion of a virus even slightly might make that virus immune to the antibodies built up by its host species without in any way decreasing the virulence or lethal powers of the virus. Therefore a mutant virus with unimpaired or increased virulence may make its appearance and attack a now non-immune but previously immune population at any time. The Influenza virus has been attacking humans for hundreds of years causing a prostrating but rarely fatal illness. (4) (3) About 1917 a mutant form appeared which had highly lethal powers and caused several million deaths. A similar event occurred several years ago in West Africa. As a rule Yellow Fever in this area is a rather mild infection in the natives. At one time from the Ubi mountains a mutant form suddenly appeared and caused many thousands of deaths. Mutations of virus are easily and frequently produced under controlled conditions and we know they also occur under natural conditions. The ability to alter antigenicity without decreasing virulence is potentially a very deadly feature of viruses.

The second outstanding characteristic of viruses is latency. This quality depends upon the fact that any virus living through many generations of a certain host species establishes a balance so that the host suffer little if at all from the virus and the virus remains undetected. The importance of this latency factor is

*Pathologist, Arkansas Baptist Hospital, Little Rock, Ark.

historically well established. (3) A high incidence of Japanese B. encephalitis appeared in the American troops in Korea in 1950 although there was no such encephalitis known to be endemic in Korea. Testing the Korean population proved that they were largely immune because of previous contact with the virus. Another similar example is the appearance of Rift Valley Fever in South Africa in a highly virulent form. In the populations carrying the pathogenic viruses cited, an adaptation between the host and the virus had developed. There was no clinical evidence of the presence of the virus, therefore the virus could be considered latent. These hosts had adequate specific antibody formation to prevent them from developing the disease caused by these viruses. The introduction of a new host of the same species as the immune host, but without immunity, permitted invasion by the latent viruses and the production of the specific disease characteristic of this virus. A virus that is latent in a host species may go undetected for centuries waiting only for slight mutation or contact with a favorable population or with the appearance of the right new organism in the host, to become a virulent attacker and a major public health problem. Andrewes demonstrates this last factor very well in his reference to mouse hepatitis (5). This hepatitis virus is trivial in its effect on weaned mice but if the parasite, *Eperythrozoon coccoides* is present in the mouse a rapidly fatal hepatitis is produced.

Physically and chemically viruses have an exceedingly simple structure. They are composed of a protein envelope enclosing a core of nucleic acid (6) (1). Viruses probably occur in many shapes but the three most common are the rod, the sphere and polyhedron or tadpole (7). Although a virus has a simple structure this structure has endowed the virus with many properties which are listed as follows:

1. The ability to infect and the production of disease (3)
2. Fixation of complement (3)
3. Agglutination of red cells (3)
4. Reproduction (1)

5. Perpetuation (8)
6. Mutation (8)
7. Antigenicity to produce immunity (3)

The life cycle of viruses is quite characteristic and apparently peculiar to the viruses. In studying the life cycle of viruses it is found that the complete virus particle is incapable of reproduction (8) and is found only outside the cell, but the complete particle is capable of attaching itself to a cell. This attachment is accomplished by the interaction of the electrical charges on the surfaces of the cell and the virus (7). The pattern of the electrical charges is characteristic in each. The charged amino groups of the virus are bound to the carboxyl groups on the cell (7). The initial attachment of the virus to the cell appears to be electrostatic. The essential continued attachment is aided by enzyme action. Enzyme activity also makes it possible for the nucleic acid portion of the virus to penetrate the cell membrane and enter the cytoplasm.

When the virus enters the cytoplasm of the cell the second phase of its life cycle begins. In the interaction of the virus with the cytoplasm and nucleus of the invaded cell a pool of building material is formed (1) (7). As the nucleic acid portion of the virus enters the cell the protein envelope of the virus is cast off and left outside of the cell. The nucleic acid portion of the virus entering the cell has the characteristic property of being able to block the metabolic activities of the host cell and convert these activities to its own use. (1) (7) As soon as the nucleic acid portion of the virus enters the cytoplasm its identity is lost and it can no longer be identified or detected. It appears that by some metabolic process the genetic substance of the virus serves as a template and by stereochemical means utilized the materials available in the replicating pool to reproduce the genetic substance of the virus. This template could form a mirror image of the genetic substance of the virus from the materials of the cell and in turn the mirror image would reproduce the original genetic picture of the virus. Reconstruction of the virus particles appears to take place in the

cytoplasm close to the surface of the cell. In passing out of the cell the nucleic acid portion of the virus particle appears to acquire the materials for its protein envelope. The materials derived from the cell surface help form a stable envelope containing lipids and mucoproteins. (9) The virus therefore does not become a complete entity until it is passing out of the cell.

With its passage through the cell wall, out into the medium surrounding the cell, the virus again becomes a complete virus particle. It is no longer capable of reproduction but it can be identified and it is capable of infecting a susceptible cell. As soon as the virus particle becomes attached again to the susceptible cell the cycle will be repeated.

The life cycle just described is the life cycle of a virus under ideal conditions with no allowances being made for the occurrences of alterations that will develop under natural conditions. These alterations, although they do not change the intracellular reproduction and multiplication of virus, are clinically very important.

The two most important changes occurring in a virus under natural conditions are the formation of a pro-virus and the formation of a mutant.

The formation of a pro-virus adds greatly to the difficulties of virus study. Since the portion of the virus particle that enters the cell is the genetic substance it has two self perpetuating courses it can follow. The first course is reproduction with or without mutation. The second course is the formation of a pro-virus. The chemical make-up of the genetic substance of the virus is similar to the genetic substance of the host cell. The nucleic acid of the virus may anchor on a chromosome of the host cell nucleus and behave as a part of the genetic substance of the cell. In this form it may be passed by cell division to an infinite number of succeeding cells depending on the number of following generations of cells. (8) The pro-viruses transmitted thus retain their virus potential and may be liberated from the genetic structure of the host cell to behave as a potent virus at any time. Any substance or form of energy that is cap-

able of producing a mutation is apparently capable of liberating and potentiating a pro-virus. Some of these liberating substances are X-ray, ultra-violet rays and nitrogen mustard. The ability of apparently normal cells to transmit a potential virus to the cells progeny for many generations means it is possible to have virus infection with no obvious source. A pro-virus in this form does not appear to be antigenic and does not cause specific antibody production. The clinical implication of this feature of viruses is immense.

Mutations and latency of viruses are also clinically of great importance. Mutations may be produced by substances and energies already mentioned. Mutations may also result from the infection of the same cell by two different viruses. Both viruses appear to create a pool of genetic material in the replicating pool. (4) (2) In the reproduction of the virus material the genetic substance of the two viruses is not always kept separate and a combination of the genetic substances may produce a new virus. These combinations do not always produce a hybrid or a new type that will breed true. Because the reproduction of viruses is intimately concerned with the life processes of the cells of the host, a change, even slight, in the virus or cells of the host may produce an unpredictable new clinical condition.

SUMMARY

The study of viruses is one of the largest frontiers remaining in medicine. The intimate association of viruses with the genetic material of the host cells increases the significance of the viruses. This intimate association may be very important in both heredity and tumor formation. The development of the provirus phase and the ability to mutate make the accurate study of viruses very difficult and also provide an explanation for many behavior problems associated with viruses.

The realization of the potentialities of a mutant virus should keep us aware of the fact that at anytime we may be only one mutation away from a serious epidemic.

Knowledge of the fact that the active metabolic phase of the life cycle of a virus is within the host cell is adequate explanation for the usual failure of antibiotics in virus diseases.

It is from a long continued study of viruses that we will learn their true significance and also learn a sound approach to the proper therapy of virus diseases.

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Virus Particle

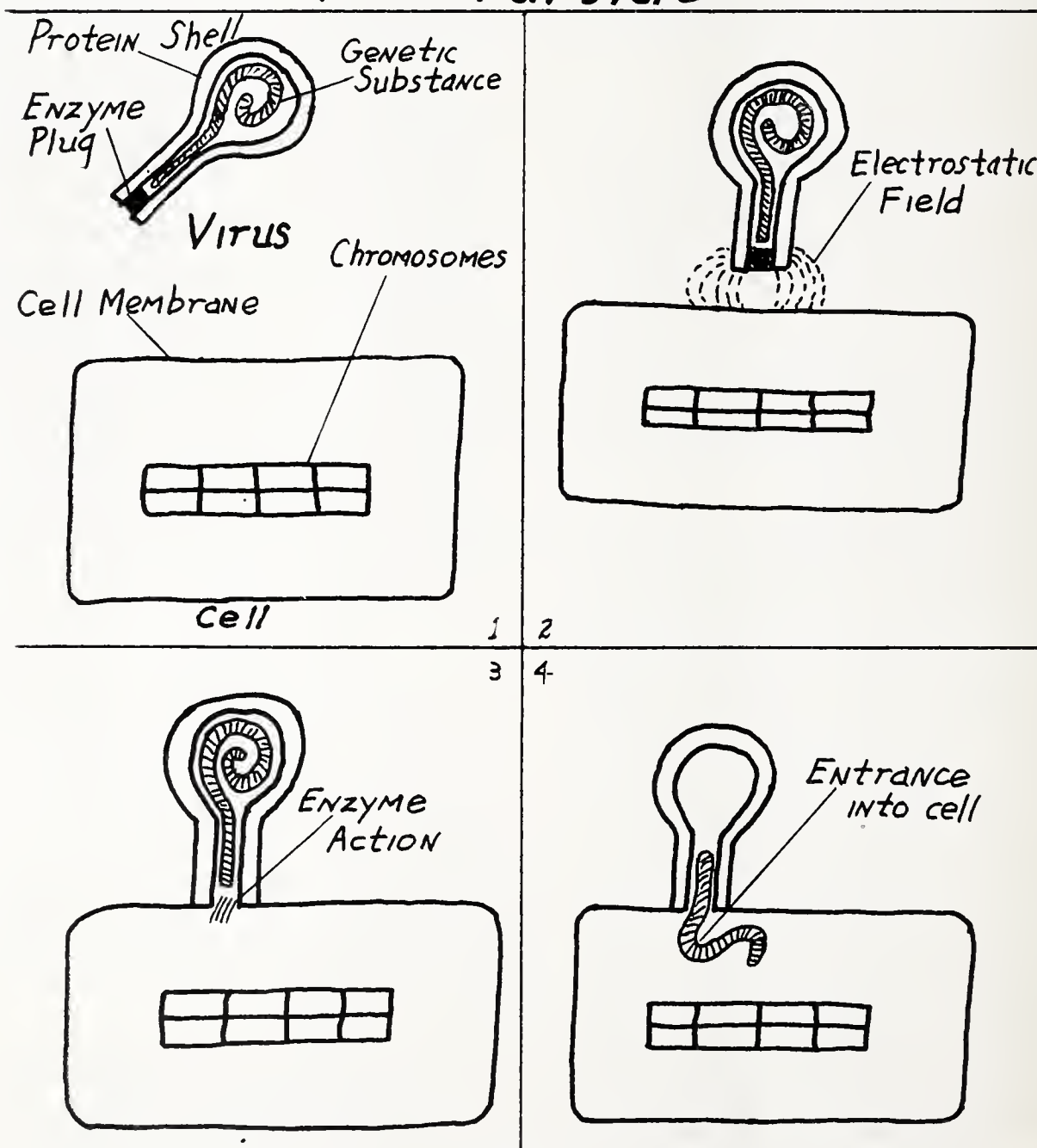
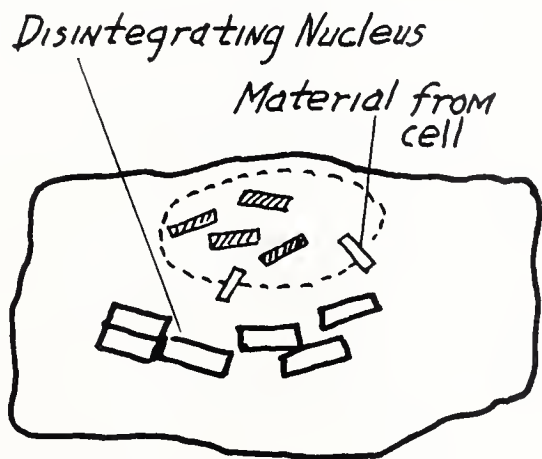
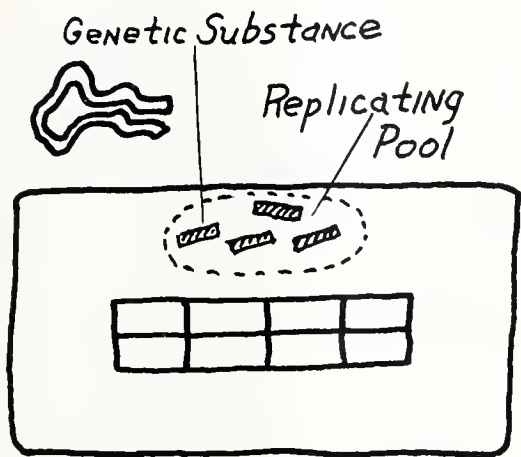


PLATE 1

This illustrates the free virus particle and it's union with a host cell.

Virus Intracellular Phase



1 2

3 4

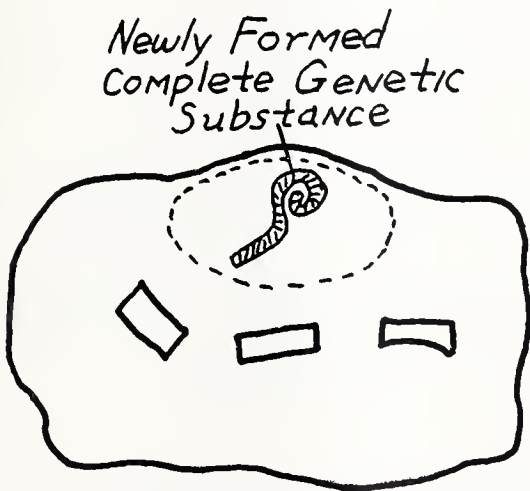


PLATE 2

This shows active metabolic and reproductive phase in the life of a virus.

Provirus

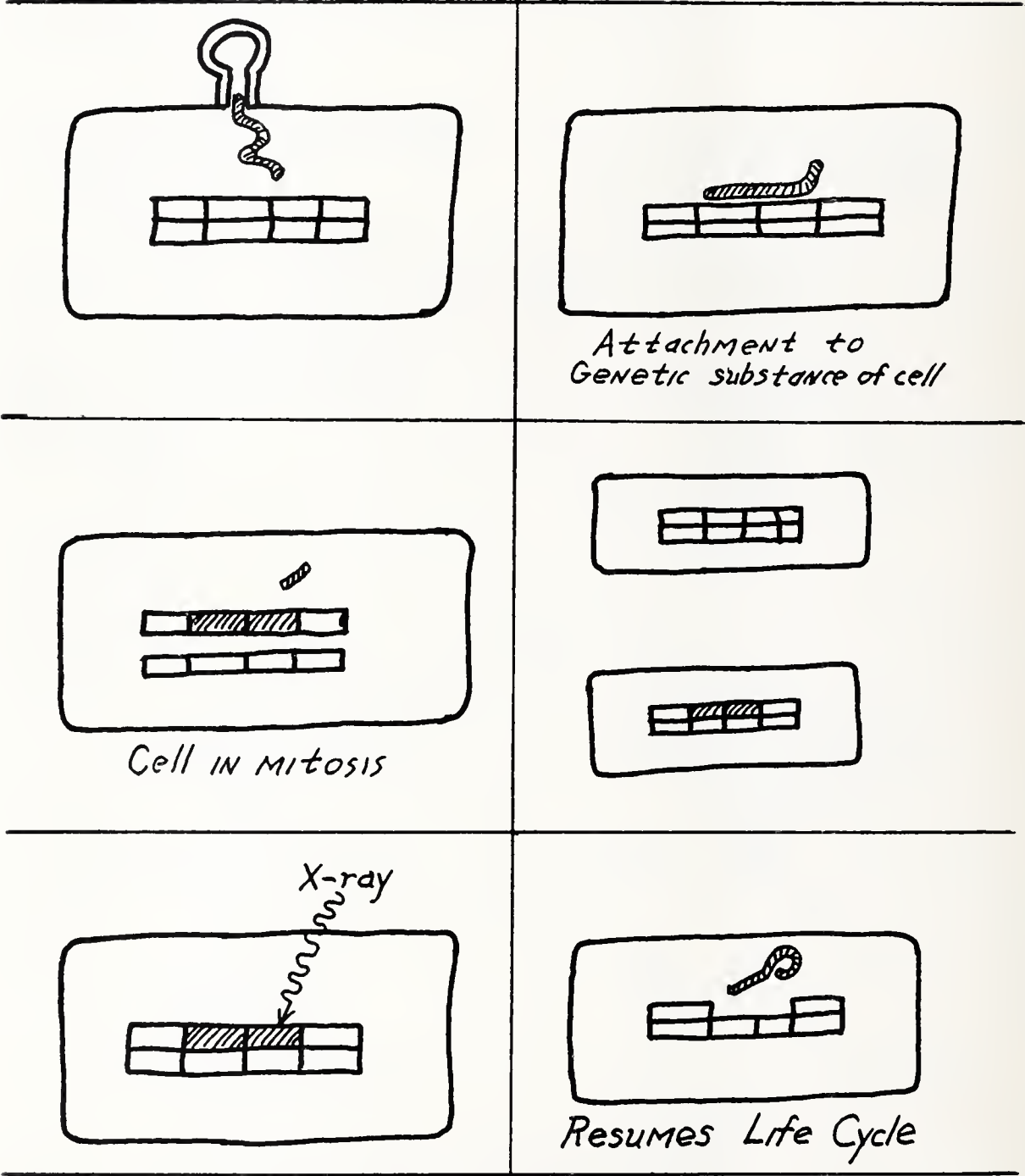


PLATE 3

This diagrams the combination of a virus with the genetic substance of a host cell.

CONCOMITANT INFECTION

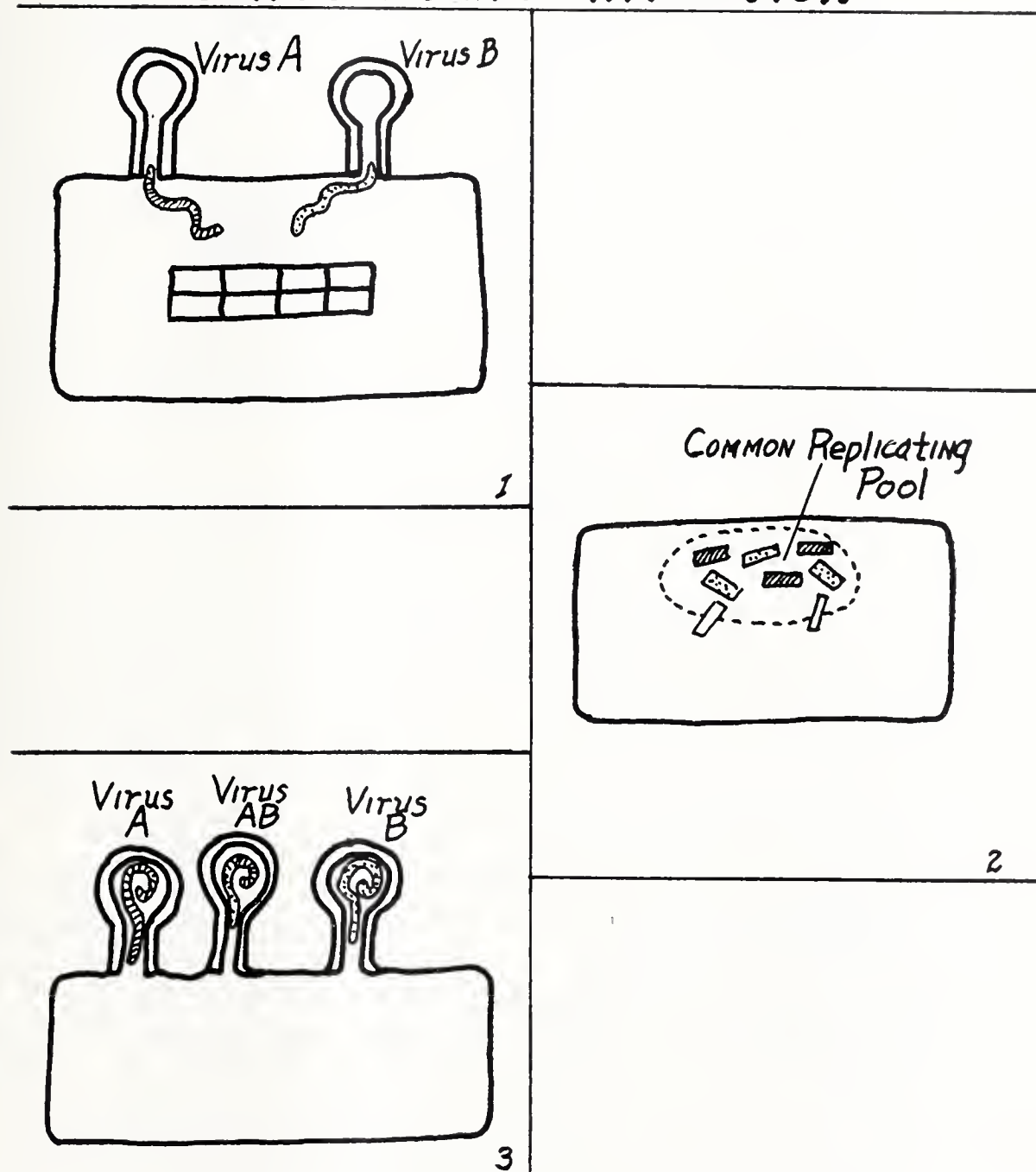


PLATE 4

This illustrates how a concomitant infection by two types of viruses may produce a third and possible new type of virus.

Possible Fates of Virus Particle

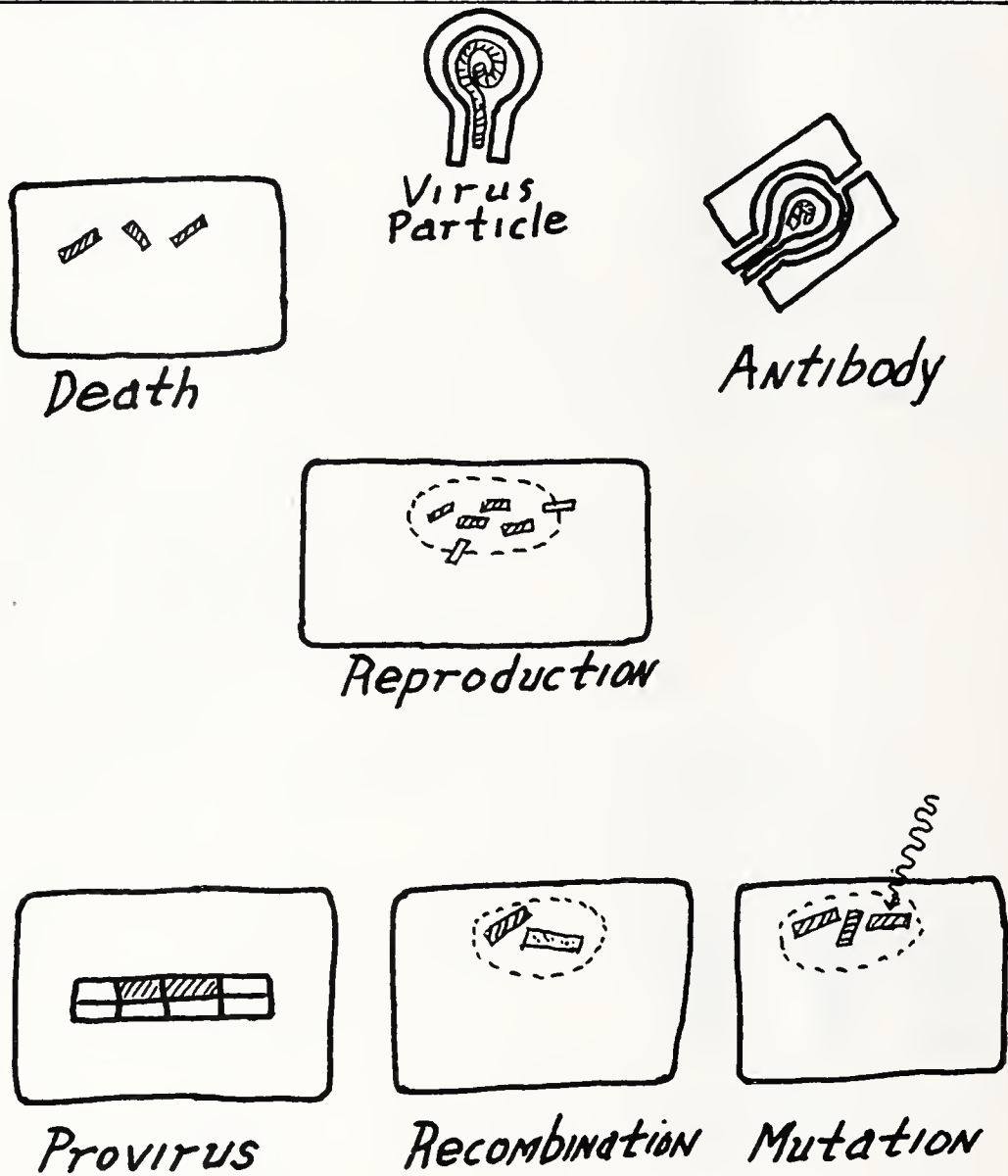


PLATE 5

This shows the variety of destinies available to any virus particle.

Prevention of Retroental Fibroplasia in Arkansas

JOHAN W. ELIOT, M.D.*

The Maternal and Child Health Division of the Arkansas State Board of Health became interested in the prevention of Retroental Fibroplasia in 1952, when very impressive evidence had accumulated that this eye ailment of premature infants could be, to a very large extent, be prevented by careful control of oxygen administration in the postnatal period. A program of demonstration of oxygen analyzers and discussion of oxygen regulation with hospital personnel was carried out in Arkansas Hospitals in 1953, and reported in the Journal of the Arkansas Medical Society in November 1954.

SURVEY OF RETROENTAL FIBROPLASIA PREVENTION IN ARKANSAS HOSPITALS

As a follow-up to its 1953-54 program the Maternal and Child Health Division was anxious to learn what steps have been taken by hospitals to assure limitation of oxygen concentrations for premature infants. During the past year a questionnaire concerning the use of oxygen analyzers and routines of oxygen therapy for premature

infants has been mailed to the administrators of all of the 118 hospitals which care for babies, licensed by the Division of Hospitals of the Arkansas State Board of Health. Replies were received from 93 hospitals, or 80% of the total. The hospitals replying contained 91% of the bassinet capacity in the state. The results of this questionnaire are shown in Table I.

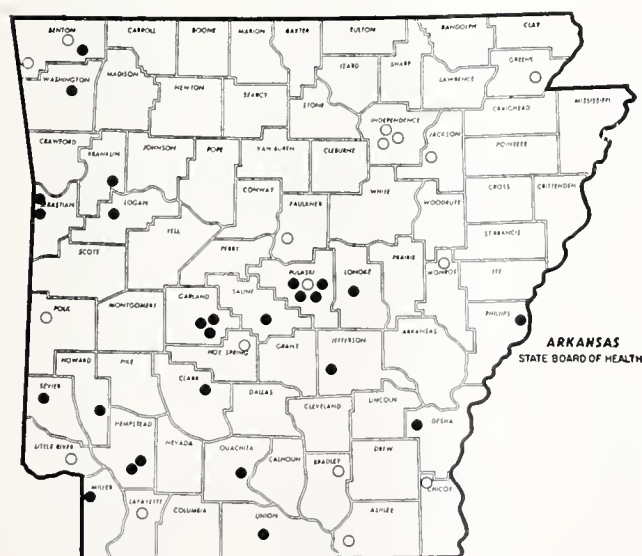
26 hospitals, containing 48.1% of the bassinets in the hospitals reporting, now own some type of oxygen analyzer. It is of interest that these 26 hospitals actually have 43.7% of the total bassinet capacity in the state, reported and unreported. 18 hospitals, with 15.6% of all bassinets reported, are planning to get an analyzer (figure 1). The repeated use of such an analyzer, to limit oxygen concentration to 40%, is the best protection that can be given against retroental fibroplasia. There seems to be a sort of regional epidemiology in the purchase of analyzers. The center, southwest and northwest portions of the state are to be congratulated.

With respect to the protection that babies are given against retroental fibroplasia the hospitals of the state fall into four categories.

(1) 9 hospitals with 11.4% of the bassinet capacity in hospitals reporting have an oxygen analyzer, and limit the use of oxygen to times when the baby is actually cyanotic. These hospitals are probably giving their premature infants the greatest degree of protection from retroental fibroplasia.

(2) 18 hospitals representing 37.6% of the total reported bassinet capacity own an oxygen analyzer and are in a position to measure and limit the oxygen concentration, and give oxygen for other indications besides cyanosis only. Several of these larger hospitals indicated that they give oxygen for cyanosis or respiratory distress, which is very similar to the criterion of giving oxygen for cyanosis alone. We feel that the babies in these hospitals are probably rather well protected from retroental fibroplasia.

FIGURE 1



- Hospitals planning to buy an O₂ analyzer.
- Hospitals which own an O₂ analyzer.

*Maternal and Child Health Division of Arkansas State Board of Health.

TABLE I
Questionnaire Concerning Prevention of Retroental Fibroplasia in Arkansas Hospitals
(Addressed to hospital administrators)

Question	Number of Hospitals	Number of Bassinets	% of Total Bassinets
1. Does your hospital own an oxygen analyzer?			
Yes.....	26	543	48.1%
No.....	67	585	51.9%
(a) If yes, what make of analyzer?			
Mira.....	16	393	34.8%
Beckman.....	2	60	5.3%
Hays.....	2	44	3.9%
Analox.....	1	12	1.1%
McKesson.....	1	10	0.9%
OEM.....	2	9	0.9%
Harris.....	1	5	0.4%
Not stated.....	1	10	0.9%
(b) If no, does your hospital plan to purchase one?			
Yes.....	18	176	15.6%
No.....	35	294	26.1%
Not sure.....	7	79	7.0%
No answer.....	6	34	3.0%
2. Do orders for premature infants specify percent of oxygen to be given?			
Hospitals with O ₂ analyzer:			
Yes.....	25	531	47.1%
No.....	1	12	1.1%
Hospitals without O ₂ analyzer:			
Yes.....	30	271	24.0%
No.....	36	309	27.4%
No answer.....	1	5	0.4%
(a) If yes, what is the maximum percent permitted?			
Under 21%*.....	3	28	2.5%
21% - 40%.....	25	491	43.5%
Over 40%.....	3	95	8.4%
Answer given in liters per minute.....	14	120	10.6%
Oxygen limiting device used.....	1	12	1.1%
Not stated.....	8	78	6.9%
3. Are there standing orders regarding administration of oxygen to premature infants?			
Yes.....	31	467	41.4%
No.....	60	642	56.9%
No answer.....	2	19	1.7%
(a) Is oxygen ordered for all premature infants for a specified length of time?			
Yes.....	4	29	2.6%
No.....	85	1062	94.1%
No answer.....	4	37	3.3%
For how long a time?			
Answer:			
"24 hours"			
"First 4-5 days"			
"Few days"			
"12-24 hours"			
(b) Is oxygen ordered to be given to premature infants only if they are cyanotic?			
Hospitals with O ₂ analyzer:			
Yes.....	9	129	11.4%
No.....	18	424	37.6%
Hospitals without O ₂ analyzer:			
Yes.....	39	312	27.7%
No.....	16	154	13.7%
No answer.....	11	108	9.6%
(c) Please describe any other type of standing orders with regard to oxygen for premature infants which you may have.			

PREVENTION OF RETROLENTAL FIBROPLASIA IN ARKANSAS

Answers:

There were several significant groups of answers:

- (1) Statement that oxygen is given only on individual orders of, or under direct supervision of the physician: (Several of these replies seemed to imply that the personal attention of the physician somehow assured the baby's safety from excess oxygen, though no analyzer was available.)..... 22 hospitals
- (2) Oxygen is gradually reduced, if used 6 hospitals
- (3) Oxygen given for retraction or respiratory distress as well as cyanosis 6 hospitals
- (4) Prematures routinely transferred elsewhere..... 4 hospitals
- (5) All Caesarian section babies placed in oxygen 1 hospital
- (6) Alevaire is given routinely with oxygen..... 1 hospital
- (7) Oxygen given by funnel 1 hospital
- (8) Oxygen given by nasal catheter..... 1 hospital

4. Do nurses on all shifts use the oxygen analyzer?

Hospitals with O₂ analyzer:

Yes
No

Number of
Hospitals
19**
7

*These hospitals named a figure which was less than the amount of oxygen in the earth's atmosphere.

**These hospitals nearly all own the Mira or Beckman analyzers.

(3) 39 smaller hospitals do not yet have oxygen analyzers but give oxygen only when a premature infant is cyanotic. These hospitals have 27.7% of the bassinet capacity of the hospitals reporting and average 8 bassinets each. This sparing use of oxygen is highly approved by all authorities on the subject now and will be of substantial protection from retrolental fibroplasia to these premature infants. It is hoped that all hospitals caring for premature infants will soon get an analyzer, but we feel that there is already an awareness of the retrolental fibroplasia problems in these smaller units which affords a certain protection to the babies.

(4) 16 hospitals with 13.7% of the total reported bassinet capacity do not have an analyzer, and do not limit the use of oxygen to babies who are cyanotic without it. 11 hospitals with 9.6% of the total reported bassinet capacity did not indicate their criteria for giving oxygen. 4 hospitals still routinely administer oxygen to all premature infants. These hospitals may be in substantial danger of inflicting retrolental fibroplasia on some of the premature infants in their care.

Needless to say, the Maternal and Child Health Division is also concerned about what provisions for regulation of oxygen have been made in the 20% of all the hospitals from which no reply was received to its questionnaire.

Thirty hospitals replied that their physicians' orders specified the maximum per-

cent of oxygen permitted, although they had no oxygen analyzer with which to measure it. Fourteen of these described the maximum percent allowed in terms of a rate of flow in liters per minute. The rate of flow of oxygen into the incubator does not indicate the concentration of oxygen that remains in the incubator. This can only be determined by direct measurement with an oxygen analyzer. These and other points requiring clarification were discussed by correspondence with the individual hospitals concerned.

EVALUATION OF OXYGEN LIMITING DEVICES

Within the last two years a number of devices have come on the market which are intended to prevent the oxygen concentration in an incubator from rising over 40%, regardless of how high a flow rate of oxygen is used. A number of inquiries have come to the Maternal and Child Health Division concerning these devices. The Division had no authoritative information on the effectiveness or merits of these devices with which to answer these questions. It seemed desirable to try some of them at first hand and see whether they function as advertised.

Three manufacturers were kind enough to furnish the Maternal and Child Health Division with samples of their oxygen regulators: the Oxygen Equipment Manufacturing Corporation, the A. S. Aloe Company, and the Gordon Armstrong Company. All of these devices work on the Ven-

turi principle, drawing room air into the stream of oxygen through one or more side openings. The faster the stream of oxygen, the more air is sucked in and mixed with the oxygen. This principle was incorporated some time ago into the Vapojetette attachment of the Isolette. The manufacturers of the Isolette found that, to create mist, a flow of 6 liters per minute of oxygen was necessary, but they recognized that the high level of oxygen that would thereby result in the Isolette was not necessarily desirable. They therefore made an adjustable collar around the tube leading from the nebulizer, with two sizes of holes. When the larger holes are open the oxygen level in the Isolette is consistently maintained under 40%. Equipping an Isolette with one of the newer oxygen limiting devices in addition to the Vapojetette attachment would seem to be "carrying coals to Newcastle."

TABLE II

Oxygen Levels With and Without Oxygen Limiting Devices Attached to Incubators. (All incubator vents were closed during these test runs, which were all of one hour duration.)

Incubator	Oxygen Limiting Device	Oxygen Flow, Liters per Minute			
		1	2	4	6
Isolette A	E & J				35%
	None				55%
Isolette B	E & J		28%		32%
	Vapojetette (setting No. 1)		30%		32%
	None		31%		48%
Isolette C	E & J		32%		33%
	Vapojetette (setting No. 1)		30%		33%
	None		35%		56%
Armstrong Hand-Hole	Armstrong (40% O ₂ setting)	33%	35%	34%	36%
	Armstrong (100% O ₂ setting)	37%	46%	64%	65%
	E & J			32%	33%
	None				
Armstrong X-4	E & J		24%		36%
	None		27%		39%
	E & J				31%
Aloe	None				40%
	Aloe				28%
	None				36%

The results of the tests carried out are shown in Table II. It is apparent that the devices do maintain oxygen levels under 40%, as they are intended to, if they are installed properly.

A device relying upon suction, however, cannot be expected to function reliably against pressure. It can be seen from Table III that when a regulating device was installed in an oxygen system before the oxygen was forced through the small hole of a nebulizer, the nebulizer would not work. Oxygen blew out the side holes under pressure, instead of air being pulled in, and

TABLE III

Oxygen Levels After Installing a National Cylinder Gas Company Vaporizer Between the Oxygen Limiting Device and Incubator.

Incubator	Oxygen Limiting Device	Oxygen Flow, Liters/Minute			Comment
		2	4	6	
Armstrong X-4	Armstrong (100% O ₂ setting)			47%	Vapor No
	Armstrong (40% O ₂ setting)			37%	Vapor No
	Aloe (100% O ₂ setting)			48%	Vapor No
	Aloe (40% O ₂ setting)			31%	Vapor
(Vaporizer removed)	Aloe (40% O ₂ setting)	29%	30%	30%	

only pure oxygen passed on into the incubator. The oxygen level in the incubator then would vary according to how much oxygen got by the resistance the nebulizer offered. Probably a great deal of the oxygen went out the side holes in most cases. The nebulizer could not be made to give off a mist, no matter how high the oxygen was turned. Manufacturers instructions specifically warn against this manner of installing the devices. This warning is simply re-emphasized here.

Use of these devices also seems to be contra-indicated with the Rockette, at least with its lid tightly closed. It seems that there is just enough back pressure to prevent the sucking in of room air, so that the regulating device fails to limit the oxygen concentration to 40% (Table IV).

How applicable are these devices to the needs of Arkansas hospitals? In general, the cost of one of these devices is roughly one - seventh to one - third the cost of the most commonly purchased brand of oxygen analyzer, the Mira.* This would seem at a

TABLE IV

Oxygen Levels With and Without Oxygen Limiting Devices Attached to Rockette (lid closed).

Incubator	Oxygen Limiting Device	Oxygen Flow, Liters/Minute	
		4	
Rockette	E & J		58%
	Aloe		66%
	None		72%

glance to be a great advantage. However, this Division feels that a second look at the situation is warranted for most hospitals, for three reasons:

1. If the hospital has three or more incubators, the cost of one regulator for each incubator soon approaches the cost of an analyzer, which can be

*Oxygen limiting devices: Aloe, \$48.50; E & J, \$19.50; Gordon Armstrong, \$19.42. Oxygen analyzer: Mira, \$147.00.

PREVENTION OF RETROLENTAL FIBROPLASIA IN ARKANSAS

used for an unlimited number of incubators.

2. If a hospital gives any other types of oxygen therapy in tents, such as for cardiac patients, the analyzer will be a valuable adjunct. Oxygen is often poured into such tents at a very high and wasteful rate for no other reason than because there has been no way of testing to see whether an effective concentration is present.
3. While Table II reveals that oxygen levels are kept below 40% by the regulating devices, it also reveals that there may be substantial variation within this range, and only an analyzer can tell just what the oxygen level really is.

The Maternal and Child Health Division urgently recommends that all hospitals caring for premature infants set up means for limiting oxygen concentrations in incubators to 40% or less. The Division recommends that this be accomplished by purchase and use of an oxygen analyzer rather than purchase of oxygen limiting devices if a hospital has (a) 3 or more incubators, or (b) an incubator plus other oxygen tent therapy. There would be no objection, of course, to purchasing oxygen limiting devices in addition to an oxygen analyzer.

In some large medical centers in some other states there has been use made of another approach to oxygen limitation, a mixture of 40% oxygen and 60% nitrogen, stored in tanks like ordinary oxygen. This Division has been informed by one of the principal oxygen suppliers in this area, the Linde Air Products Company, that it is expensive and difficult to furnish this mixture. The cost would be about twice that

of ordinary oxygen per cylinder. It would be in very limited demand and could not economically be stocked locally as oxygen is. The tanks would have to be repainted and would not be exchangeable locally for regular oxygen tanks. Freight costs from the nearest point where the mixture can be made would have to be paid (Memphis is the nearest point to Little Rock). The final cost of such a mixture at Little Rock would probably be around \$12.00 per cylinder.** This would not seem to be the best solution to oxygen limitation in Arkansas.

SUMMARY

This report describes progress of Arkansas hospitals in securing equipment and establishing procedures for safe limitation of oxygen administration to premature infants, to avoid the development of retrolental fibroplasia. The Maternal and Child Health Division has urgently recommended that oxygen concentration in incubators be limited to 40% or less. Questionnaires were sent by the Maternal and Child Health Division to all hospitals caring for infants, and replies were received from hospitals containing 91% of all the bassinets in the state. Of these bassinets, 48.1% are in hospitals which own some type of oxygen analyzer, and another 15.6% of the bassinets are in hospitals planning to purchase an analyzer. Tests of oxygen limiting devices were made which indicate that these devices limit oxygen in the incubator to less than 40%, as advertised. The Maternal and Child Health Division nevertheless recommends that if these devices are purchased, they should ordinarily be purchased in addition to, rather than instead of an oxygen analyzer.

**Personal communication from Mr. H. T. Heath, Manager, Oxygen Therapy Department, Linde Air Products Company, Birmingham, Alabama.

Tetanus Following Abortion

C. LEWIS HYATT, M. D.

ROBERT F. HYATT, M. D.*

On September 16, 1954, a young single white woman aged 24 years was seen in our office with the complaint of inability to open her mouth and painful spasm of the jaw and neck muscles, with onset during the previous 24 hours.

The left forearm of the patient was in a cast and sling. She stated that she had fallen from the back door steps one week previously fracturing the left forearm just above the wrist. The fracture had been promptly reduced and casted by a surgeon in a neighboring city. Telephone conversation with the surgeon revealed that no laceration or abrasion had been noted at the surgery. However, his recommendation was to immediately bi-valve the cast and examine closely for any wound thru which a tetanus infection might have gained entrance.

Tentative diagnosis of tetanus was made, and the patient was promptly hospitalized. Careful physical examination, including examination of the fractured arm, revealed no significant wound, although small ecchymotic lesions were noted on the left shoulder, left hip and right thigh. These contusions had been sustained in the fall, but she recalled no break in the skin. It was noted while bi-valving the cast with the electric cast cutter that severe tonic spasms were induced, causing great pain.

At the completion of the examination the patient asked to speak to the attending physician in private, and she related that ten days previously a criminal abortion had been performed.

Urinalysis and blood studies on admission to the hospital were within normal limits except slightly decreased Hemoglobin of 73%. During the entire hospital stay the temperature was never more than 100° which occurred in the first few days after admission.

Intensive therapy of tetanus was instituted. Tetanus antitoxin was administered in doses of 15,000 units intramuscularly. Tubocurarine C1 in aqueous solu-

tion was administered 50 mgm. intramuscularly several times daily. Large doses of Penicillin and Streptomycin were given, and intramuscular barbiturates in large doses were necessary for sedation.

In spite of the treatment being given condition of the patient became more serious rapidly with complete inability to swallow and rigid spasm of the neck, shoulder and back muscles so as to draw the head far backward and cause extreme pain.

It was necessary to increase the dosage of antitoxin, and 15,000 units were added to intravenous infusions once or twice daily in addition to the intramuscular administration of about 40,000 units daily for several days. We reasoned that intramuscular doses should be given several times daily to neutralize toxins being continuously formed by the growing organisms. A repository Tubocurarine CL — Tubadil, Endo products, Inc., was begun in rather large doses to replace the aqueous solution; and this product gave a much more effective and prolonged control of muscle spasm.

Inability of the patient to swallow necessitated the use of a mouth gag and very frequent suction of the mouth and pharynx with a catheter tipped mechanical suction. Although the attending staff was prepared to perform an immediate tracheotomy—this was not necessary. During the first two weeks of hospital stay it was necessary to support the patient by intravenous infusions of glucose solutions containing soluble vitamins B and C and electrolytes. After the initial two weeks she was again able to swallow some liquids and very soft foods.

Slow but steady clinical improvement continued until the patient was discharged from the hospital symptom-free after a stay of 34 days.

SUMMARY

1. Tetanus following criminal abortion has had a mortality approaching 100%. Rubeska reported 20 cases

*515 N. Main, Monticello, Ark.

with a total mortality. Schneider reported a series of cases with 91% mortality. Successful treatment of one such case is reported here.

2. Probably the most effective recent addition to our armamentarium in the therapy of tetanus has been a long acting repository Tubo-curarine Chloride — Tubadil, Endo Products, Inc., which in large measure controls and prevents the severe muscle spasm.
3. Careful attention to details of supportive treatment and treatment aimed at prevention of fatal complications is no less necessary than previously.

These include very large doses of tetanus antitoxin; appropriate antibiotic therapy; supportive use of fluids, glucose, soluble vitamins, and electrolytes; prevention of respiratory embarrassment and asphyxia; and sedation.

4. Most common fatal complications of tetanus as listed by Tucker and Lasater: Treatment of Tetanus—*Journal Lancet* 70: 107-110, 1950:
 1. Spasm of glottis and muscles of respiration with asphyxia.
 2. Toxic encephalitis.
 3. Exhaustion.
 4. Medullary failure.
 5. Secondary pulmonary infection.

◆ *What's* NEW ◆

PROCTOLOGY

JOHN LAURENS, M.D.*

Operative technique in ano-rectal surgery has undergone little, if any significant change during the past five years. However, during this same period, numerous noteworthy contributions have been made in the two closely allied fields which have always been of equal, if not greater importance to the proctologist: first, the control of post-operative pain following ano-rectal surgery; and second, the healing and after-care of the wound.

Because of the importance of brevity and conciseness in an article of this nature, I have selected what I feel to be the most representative, though possibly controversial articles from the recent literature.

The pain which follows most operative procedures on the anorectum has too often been regarded as an inevitable and unfortunate sequel to the surgery. For years, various long-lasting, water- or oil-soluble anesthetic drugs have been injected in the peri-anal region either before or after sur-

gery, and I am sure we have all been deluged by statistics attempting to prove that one drug or another will abolish post-operative pain.

Turell has carried out careful and exhaustive studies in this regard, and his most recent opinions and conclusions are extremely basic and straight-forward (1, 2). He emphasizes the open, non-traumatizing technique in the performance of hemorrhoidectomy as the most important single factor in the control of pain. All pathologic tissue is removed widely but sufficient elastic skin and mucosa must be preserved between wounds, and mass clamping and bulk ligation are avoided. He further points out that there is no need for the employment of either the long-lasting anesthetic solutions or for the curare preparations. He feels that, besides failing to control pain effectively, the anesthetic drugs, like other caustic agents such as phenol or alcohol, may cause neurolysis and produce such unfavorable reactions as ne-

*1307 Donaghey Building, Little Rock, Ark.

crisis, suppuration, or even incontinence. By the same token, curare, if given in adequate doses, may produce generalized muscular weakness, impairment of muscle control, and thus interfere with early ambulation of the patient.

The strongest point this author makes is that the severity of pain depends not on the use or non-use of these various agents, but on refinements in technique and gentleness in handling tissues. To quote: "At best these agents are therapeutic crutches fostering a false sense of security and dependence on a drug that is an extremely poor substitute for good and gentle surgery."

On the other hand, equally important and significant work has been carried out by our very helpful colleagues, the anesthesiologists, which presents a somewhat different story—the other side of the picture. It has long been recognized that skeletal muscle pain is the invariable accompaniment of muscle spasm engendered by trauma, and it naturally follows that any method which relaxes or prevents the spasm should relieve its painful component. On the side of technique, many proctologists have followed the practice of dividing a portion of the external sphincter muscle (superficial posterior sphincterotomy) in an attempt to reduce this muscle spasm. This has proved extremely beneficial in certain cases of radical hemorrhoidal surgery.

Fortunately for surgeons, anesthesiologists regard their obligations to the patient as extending beyond the actual time of operation to include post-operative care as well. The efficacy of curare as an adjunct to anesthesia is well established, as is its ability to relax striated muscle. In the control of muscle spasm following traumatic surgery, the drug, d-tubocurarine, was combined in a slowly absorbed menstuum, designed to provide relaxation for the spasm and resulting pain which develop several hours after the effect of the anesthetic has worn off. The results of numerous investigators were so successful that this preparation, marketed under the trade name of Tubadil, was selected for use in patients undergoing anorectal surgery.

Fuller (3), in a series of 70 patients undergoing various types of abdominal, rectal

and orthopedic operations, administered Tubadil two hours preoperatively in a dose of 2.5 cc. per 70 kg. of body weight, repeating the dose in 24 to 36 hours if pain appeared. His results were very satisfactory with no respiratory depression or other untoward effects. Lenahan and Hamilton (4), using the formula: $\text{body wt.} \times 0.009 = \text{cc.}$ Tubadil, gave an initial injection intragluteally at the onset of surgery. Their maximum dose was 2 cc., and if necessary this was repeated in eight hours. Malia, et al. (5), in a series of 200 patients undergoing anorectal surgery, gave Tubadil to half the patients in an average dose of 1.5 cc. either at the time of surgery or immediately postoperatively, the dose being repeated in 12 hours. These authors' conclusions were that both post-operative pain and narcotic demand were significantly reduced, urinary retention was diminished, and no complications occurred other than transient diplopia and muscular weakness. However, due to some decrease in muscle control, patients should be assisted when out of bed, and extreme caution taken to be sure that the drug is not given intravenously, as this will result in respiratory paralysis and death.

Pantalone, et al. (6), have stressed the concept of the rational control of post-anorectal surgery pain as follows: "Where pain is caused by muscle spasm, the relief of such pain may be achieved more physiologically by drugs which, acting peripherally at the site of the spasm, produce muscle relaxation, rather than by the use of central acting narcotics. The peripheral acting drug interrupts the progression of motor nerve impulses at the somatic myoneural junction. Spasm is thus relieved locally and obviates the incidence of emotional tension." In a series of 117 patients undergoing rectal surgery, Tubadil was given about 10 minutes before the end of the operation. The dose was 1 cc. given deeply intragluteally, and this was repeated not more often than every 12 hours for a total of five doses, one of these doses being administered so as to accord as closely as possible with the anticipated time of the first postoperative bowel movement. These authors' results were as follows:

1. Tubadil permitted a low postoperative demand for narcotics.

2. 99.1% were ambulatory within 24 hours, though diplopia and difficulty in walking were present in a few cases.

3. 98.1% had satisfactory perineal and sphincter relaxation, plus emotional relaxation and relief from psychic tension, the relief from pain coinciding with the muscle relaxation.

4. 91% tolerated pack removal without pain.

5. 88.8% had no pain with the first bowel movement.

6. 68.4% required no catheterization.

7. No serious curare effect requiring antidotal measures for over - curarization was encountered.

I have purposefully presented both sides of the problem of post-anorectal surgery pain and one must draw his own conclusions. I personally endorse the teachings of Turell with regards to surgical technique, though I also feel that curare, when indicated and properly used, can play a useful role in our attempts to control post-operative anorectal pain.

A survey of the recent literature brings to light several interesting points with regard to the matter of healing and after care of anorectal wounds. The presence or absence of pain after anorectal surgical procedures is frequently directly related to the healing process. Sulzberger, et al. (7), have already demonstrated the efficacy of topical hydrocortisone acetate in the management of certain dermatoses, without the adverse effects of the systemic corticosteroids. Rosenberg (8) presented his results from personal clinical observations in a series of 50 cases of anorectal surgery. Neo-Cortef ointment was used in half the cases and Terra-Cortril in the rest, the product being applied twice daily in small amounts to the external anal skin from the first to the fifth postoperative day. There was a marked reduction in edema and diminution in sphincter spasm, thereby helping to alleviate pain; skin-tab formation was absent; soft scars, without subcutaneous fibrosis, resulted; and, due to the more rapid healing, patients made a quicker return to gainful employment. I, myself, have found the steroid hormones very beneficial in selected cases, especially

when it is necessary to remove considerable pathologic tissue.

In further attempts to promote and hasten healing after anorectal surgery, the broad spectrum antibiotics have been employed orally. I, personally, have seen enough adverse effects, such as gastrointestinal disorder and pruritus ani, not to recommend their routine use. Banov (9), after careful investigations, including color photography, concluded that the use of erythromycin and tetracycline produced no discernible difference in the appearance of wounds of the anorectum as compared with a control group. Moreover, the healing time of the wounds was not accelerated, and the antibiotics did not reduce the postoperative narcotic demand, further emphasizing the fact that it is the operation itself, as in the case of pain, which plays the dominant role in influencing healing of the wound.

Because of the fact that orally administered drugs gave no evidence of improved anorectal wound healing, Banov (10) investigated the topical application of Nitrofurazone (Furacin) and its effect on combatting surface infection. This drug, a potent bacteriostatic agent, was applied daily on a gauze bandage beginning with the day of surgery and continuing until wound healing was complete. Again, color photographs were employed, and the results were as follows, as compared with the controls: the anorectal wounds treated with Furacin had clean granulating surfaces and a minimum of serous exudate; and the treated wounds healed more rapidly, hemorrhoidectomies being healed in from 10 to 12 days.

For the final word in a study of anorectal wound healing, we once again turn to the work of Turell (1, 2). In detailed studies, multiple series of hemorrhoidectomy patients were treated with various and sundry topical medications, with findings as follows:

1. The topical application of cod liver oil, vitamins A and D, chlorophyll, hydroxyquinoline, and ethyl aminobenzoate failed to expedite the healing of anorectal wounds, and these agents were in no way superior to the controls, which consisted of hydrophilic ointment U. S. P., hydrous wool fat, and water-soluble gums.

2. Cutaneous sensitivity reactions developed in 30%.

3. Most startling of all, a group of "ultracontrols" in whom the postoperative wounds were left practically undisturbed, healed just as well as those which received the conventional digital examinations and topical medications.

In conclusion, may I quote from this author once again: "Uneventful healing of wounds depends more on the type of surgical procedure performed and on the gentleness in handling tissues during operation than on either the post-operative topical application of therapeutic agents to the wounds or the performance of periodic anal digital explorations."

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A TEACHING SEMINAR FROM THE UNIVERSITY OF ARKANSAS SCHOOL OF MEDICINE

Acute Renal Insufficiency

BEN I. HELLER, M. D.*

INTRODUCTION

In a basal state in health normal renal function is associated with the perfusion of both kidneys by approximately one-fourth of the cardiac output or 1200 cc of blood. This amount of blood is equivalent to a renal plasma flow of 700 cc per minute. About 19 per cent of the plasma water that perfuses the kidneys each minute is filtered by the glomeruli resulting in a glomerular filtration rate of 130 cc per minute.

Numerous clinical disorders associated with transient shock, dehydration, depletion of sodium and chloride, metabolic acidosis, or trauma may precipitate decreases in renal function and oliguria. If these disorders are promptly treated,

renal blood flow may be quickly restored to normal and anatomic alterations of the renal tubules will not occur. On the other hand, numerous events may precipitate an intense and persistent decrease in renal blood flow and glomerular filtration rate, and acute renal insufficiency may ensue. During recent years a syndrome of acute renal insufficiency associated with a wide variety of precipitating factors has become recognized with increasing frequency. It is of the utmost importance that the syndrome be recognized early and proper treatment instituted promptly as errors in diagnosis and treatment may lead to the death of the patient.

Acute renal insufficiency may be defined as a syndrome of rapid but *reversible* loss of renal function due to renal ischemia and resulting in necrosis of cells

*Professor of Medicine, University of Arkansas School of Medicine, Little Rock, Ark.

of the proximal tubule and disseminated areas of tubular necrosis with disruption of the basement membrane in both the proximal and distal nephron (1). Synonyms that have been used are acute renal failure, acute tubular necrosis, lower nephron nephrosis, shock kidney, crush syndrome, hepatorenal syndrome, toxic nephrosis, burn nephritis, acute parenchymatous degeneration, and extrarenal uremia. The term "lower nephron nephrosis," which implies localization of pathologic change to the distal tubules, is a poor one despite its wide acceptance, since the renal lesion is disseminated.

PATHOLOGIC PHYSIOLOGY

1. Shock.—The majority of patients with acute renal insufficiency will have experienced shock due to blood loss, dehydration, or bacteremia. In those patients who do not manifest the clinical signs of peripheral vascular collapse, hemoconcentration and a deficit in circulating blood volume will frequently be present. The studies of Lauson and associates (2) indicate that the kidney participates to a pronounced degree in the vasoconstrictive phenomena of shock. The decrease in renal blood flow is considerably greater than the reduction in cardiac output, and the glomerular filtration rate and tubular function are greatly reduced. Organic tubular damage, oliguria, and uremia may be the sequelae. If the patient recovers, normal renal function may not be established for weeks or months.

2. Pigment Casts.—Hemolytic transfusion reactions and other disorders associated with a hemolytic process are commonly followed by acute renal insufficiency. The distal and collecting tubules are frequently obstructed by hemoglobin casts, but obstruction per se is not an adequate explanation for the oliguria. In some instances hemolytic transfusion reactions may be associated with peripheral vascular collapse. Even when this is not present, however, the precipitation of the casts appears to be secondary to intense renal vasoconstriction and reduction of glomerular filtration rate. The crush syndrome, in which large amounts of myohemoglobin are released from striated muscle, precipitates acute renal insufficiency through a similar mechanism.

3. Tubular Toxins.—Renal tubular necrosis is caused by numerous substances. Chief among these are carbon tetrachloride, mercuric bichloride, and the sulfonamides. Experimental work indicates that the reduction in renal blood flow and glomerular filtration rate is secondary to the tubular damage. Accidental poisoning with carbon tetrachloride is a frequent cause of oliguria. The diagnosis may frequently be overlooked since the patient may appear to present the problem of primary liver disease with hepatomegaly and jaundice. In the absence of liver involvement, an incorrect diagnosis of an acute exacerbation of chronic glomerulonephritis may be made.


4. Mechanism of Oliguria.—Reduction in renal blood flow and glomerular filtration, together with back diffusion of that filtrate which is being formed, accounts for the marked suppression of urine formation. The back diffusion occurs because of damage to the tubular cells and disruption of the continuity of the tubular basement membrane.

CLINICAL COURSE

The clinical syndrome may be divided into three phases.

1. Shock.—The duration of this phase will depend upon the promptness and adequacy of the treatment of shock. If dehydration is present, as it may be in patients during surgery, the volume of blood loss which may precipitate peripheral vascular collapse, may be less than that causing shock in normally hydrated patients. Other symptoms and signs during this phase will depend upon the primary disease present. Examples of such diseases are traumatic or operative shock with blood loss, post-partum or post-abortion hemorrhage, diabetic acidosis, and severe diarrhea. It must be emphasized that shock may be absent according to the usual clinical criteria, but water and electrolyte losses may result in appreciable decreases in plasma volumes and reduction in renal blood flow.

2. Acute Renal Insufficiency.—Following shock, hemolytic transfusion reactions, or the ingestion of nephrotoxic agents there is a rapid development of progressive renal insufficiency frequently



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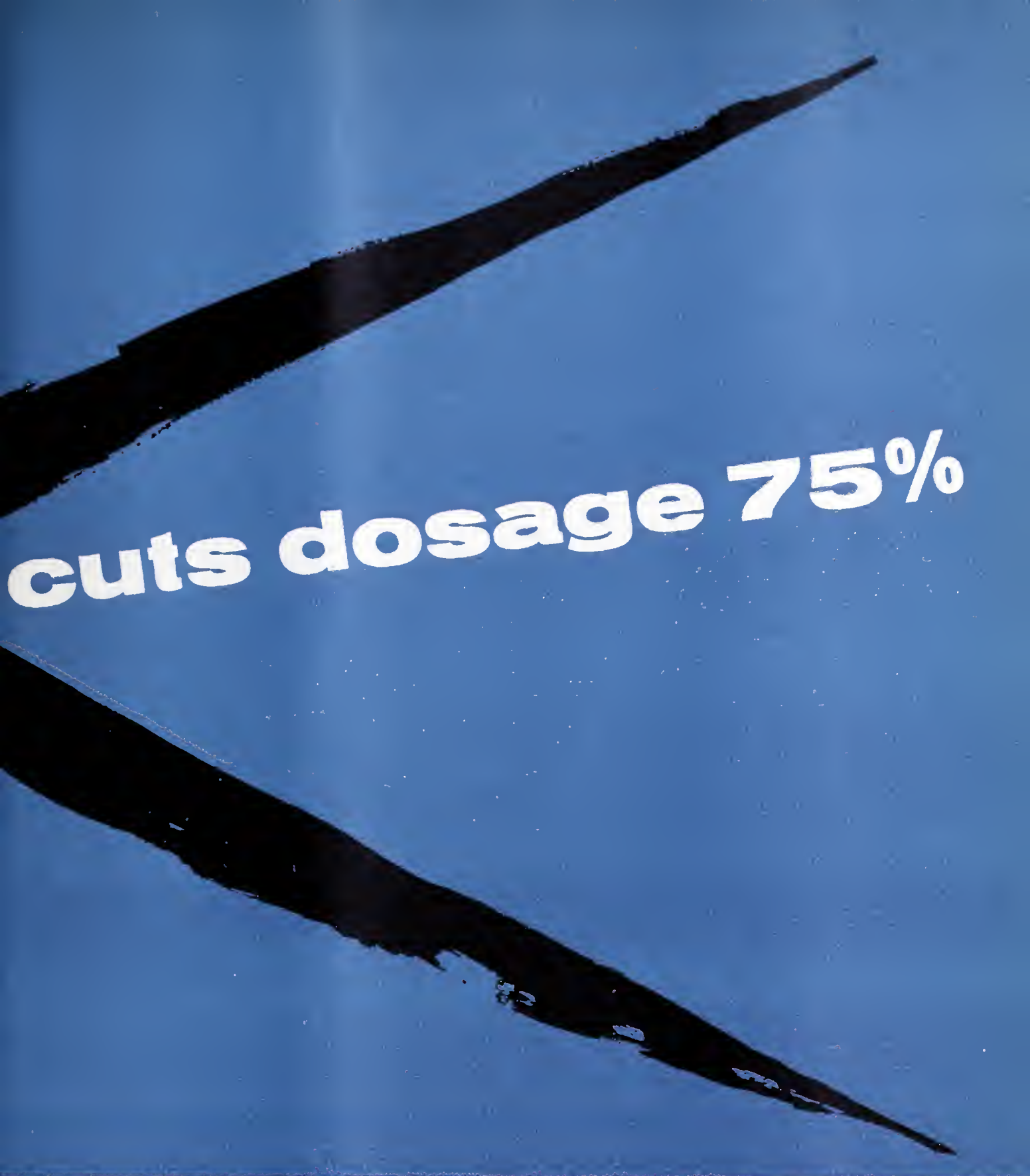
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CONVENIENCE: The low dose of 1 Gm. (2 tablets) per day offers optimal convenience and acceptance to patients.

EACH TABLET CONTAINS: sulfamethoxypyridazine . . 0.5 Gm. (7½ grains). **AVAILABLE:** Bottles of 24 and 100 Tablets.

ushered in by fever, nausea and vomiting, abdominal distention, occasionally jaundice, and pain in the costovertebral angle. Diminution in urinary output to 50-400 cc per day is the general rule. On rare occasions this syndrome may develop in spite of a daily urinary volume of 400-800 cc. Anuria is uncommon. The urine may be grossly bloody or smoky for the first few days; it is acid in reaction and contains large amounts of protein. The initial urine may have a specific gravity of 1.015 to 1.020, but concentrating ability is rapidly lost and the specific gravity becomes fixed at 1.010 to 1.012. The urinary sediment initially contains red blood cells, white blood cells, pigment casts, and hyaline and granular casts. The erythrocytes soon disappear from the urine and varying numbers of leukocytes may be seen.

As the oliguria persists there is a marked tendency for the development of signs of congestive heart failure with pulmonary edema. This is especially true if salt and water are administered injudiciously. Hypertension may develop after the first few days, the systolic hypertension being more pronounced, in most instances, than the diastolic. Hypertension is not invariable. Six of our twenty unselected cases did not have hypertension.

Gastrointestinal symptoms may continue in this phase with abdominal distention, nausea and vomiting, and diarrhea. These symptoms, as is true of all others, may vary greatly from patient to patient.

Cerebral symptoms are common. Restlessness, stupor, delirium, and coma may be present. Convulsions occur but are not common.

Early deaths are usually due to the primary disease, but fatal pulmonary edema may occur early if incorrect therapy is given. Deaths later in the oliguric phase are due principally to pulmonary edema, uremia, and hyperpotassemia.

Laboratory studies reveal a rapidly developing normocytic, normochromic anemia. The hemoglobin falls to 8 to 10 grams per 100 cc of blood and then stabilizes at this level. The anemia is due to two factors: hemolysis and decreased erythropoiesis. The anemia may persist for many weeks or months after recovery.

Rapidly rising blood urea, decreased serum sodium, chloride, and bicarbonate; and varying elevations of serum inorganic phosphorus and potassium are noted. Potassium commonly rises to levels that are neurotoxic and cardiotoxic, especially if the serum sodium is low. Muscular weakness and pain, respiratory paralysis, and flaccid paralysis of the extremities may occur when the serum potassium is at levels above 7.5 to 8 mEq. per liter. The first electrocardiographic abnormality is the presence of high, peaked T waves with a narrow base, noted initially in the precordial leads and then in the limb leads. These high, peaked T waves may first be seen in precordial lead V₂. This may quickly be followed by depression of the ST segment, varying degrees of auriculo-ventricular and intraventricular block, disappearance of the P wave, and ventricular arrhythmias. The sequence of events from the high, peaked T waves to ventricular fibrillation may be so rapid as to catch the unsuspecting physician off guard.

3. Recovery period.—The average duration of the period of oliguria is 10 to 12 days but it may persist for as long as 21 days. The duration of oliguria in 20 of our patients varied from 3 to 15 days. As tubular regeneration occurs, there is a gradual increase in urine volume and diuresis occurs. Rapid and marked weight loss may be noted with the onset of diuresis even in those patients who were not overhydrated during the oliguric phase. The data of Swann and Merrill (3) indicate that the diuresis is related in part to retention of water during the phase of oliguria. This storage of water is due in large part to the oxidation of body fats. There are some patients in whom diuresis will be so intense that depletion of extracellular fluid and blood volumes will lead to circulatory collapse if adequate fluid and electrolyte replacement is not instituted. The blood urea may continue to rise for several days after diuresis occurs. This is usually not cause for alarm, and steady improvement in the clinical course will be seen if correct treatment is given. In other instances, however, symptoms and signs of acute renal insufficiency will progress in spite of diuresis, and hyperpot-

assemia may become more intense. That the physician cannot relax his vigilance during the diuretic period is attested to by the fact that 20 to 25 per cent of the deaths occur during this phase.

After clinical recovery, normal renal function may not be re-established for many months.

DIFFERENT DIAGNOSIS

The following diseases must be considered in differential diagnosis: acute glomerulonephritis, acute exacerbation of chronic glomerulonephritis, acute or chronic pyelonephritis, ureteral obstruction from stone, sulfonamide crystalluria, metastatic cancer, and renal vascular lesions such as malignant hypertension and renal infarction. The differential diagnosis of these diseases is usually not a difficult problem. As a general rule, in the absence of a history of a disease or event known to precipitate acute renal insufficiency, the diagnosis will usually prove to be another form of renal disease.

TREATMENT

Principles.—There are several important principles governing therapy:

1. Renal ischemia produces a *reversible* renal shutdown. Tubular necrosis is potentially reversible, and the renal lesion may heal completely.

2. The kidneys cannot be "flushed out" by large amounts of salt and water in the presence of oliguria.

3. The principal cause of death is pulmonary edema.

4. Hyperpotassemia results from intake of potassium as well as from breakdown of tissue.

5. Following the sudden loss of renal function, the average insensible water loss is 1000 cc daily. The water of oxidation plus the preformed water of cellular breakdown averages 450 cc per day. The average daily water deficit is therefore 550 cc.

6. The administration of carbohydrate will spare the breakdown of body protein.

7. The phase of diuresis cannot be accepted as one of complete recovery, and careful observation of the patient must be continued.

Measures.—Therapeutic measures in keeping with the above principles may be outlined as follows:

1. Shock should be controlled promptly with effective measures. If electrolyte and water imbalance is present, these should be corrected.

2. If the diagnosis of acute renal insufficiency is suspected, evaluate the urinary output before ordering any further parenteral fluids.

3. Do not give any fluids orally for the first 24-48 hours since vomiting is very common early, and fluid and electrolyte loss by vomiting will complicate management.

4. Give 550 cc of 15 to 50 per cent glucose plus an additional volume of glucose equal to the 24 hour urine volume by slow intravenous drip daily.

5. If the patient is able to tolerate fluids orally after the first 48 hours, emulsions of fat such as Ediol or a modified Borst regimen of butter soup may furnish sufficient calories in a small amount of fluid to decrease cellular breakdown and its attendant biochemical abnormalities. Butter soup is made by mixing 150 grams of sugar with 150 grams of salt-free butter, adding sufficient cooked corn starch to make an emulsion, and enough water to yield a volume of 600 cc. The caloric content of this soup is 1775 calories. It may be fed in six portions of 100 cc each. If vomiting or diarrhea occur, oral therapy should be discontinued and parenteral therapy restarted.

6. The susceptibility of these patients to pulmonary edema should be kept in mind. If the hemoglobin is above 8 grams per 100 cc of blood during the oliguric phase, whole blood transfusions are generally not indicated.

7. There is still controversy whether the low serum sodium and chloride should be corrected during the oliguric phase. If water replacement is judicious, marked lowering of the sodium and chloride will not occur. Since attempted correction of the hyponatremia and hypochloremia carries with it the risk of overhydration and pulmonary edema, attempts at correction are generally not warranted. If loss of sodium and chloride occur by vomiting or diarrhea, the electrolyte and water loss may be quantitatively replaced.

8. Frequent serial electrocardiograms

and measurements of the serum potassium, when available, are necessary to evaluate hyperpotassemia. Insulin may be added to the glucose solution in a dose of one unit of regular insulin to two or three grams of glucose as an emergency measure to combat hyperpotassemia. Calcium and sodium have also been shown to have a beneficial effect in potassium intoxication. Meroney and Herndon (4) have recommended the following solution for emergency use in potassium intoxication:

Calcium gluconate 10%	100 cc
Sodium bicarbonate 7.5%	50 cc
Dextrose in water 25%	400 cc
50 units regular insulin	
Isotonic sodium chloride or 1/6 molar sodium lactate in a volume equal to the previous 24 hour urinary output.	

The solution is given by constant intravenous drip at the rate of 25 cc per hour. The authors state that they have noted no ill effects in their patients from the administration of this amount of sodium even when the solution had to be given for several days to combat hyperpotassemia.

9. Daily weighing of the patient is essential. If the patient is being treated properly during the phase of acute renal insufficiency, weight loss of one-fourth to one-half pound per day will occur. If body weight is maintained or is increasing, overhydration is present.

10. In the early recovery phase parenteral fluids must still be given with caution since there is a delayed diuretic response to water. Pulmonary edema and cerebral symptoms may recur with injudicious use of salt and water. After twenty-four to forty-eight hours of the early diuretic phase, daily loss of salt and water may be safely replaced over a period of twenty-four hours. Urinary volume and serum and urine electrolyte concentration serve as guides to replacement therapy during the diuretic phase. Hypopotassemia may develop during intense diuresis.

11. After the period of recovery is well established, a moderate protein, high carbohydrate diet is indicated.

12. As noted by Swann and Merrill (3), any sensible plan for restricting water, sodium, chloride, potassium, and protein and providing calories as carbohydrate will result in low morbidity rates and recovery in the majority of patients. In some severely ill patients, especially in those with hyperpotassemia, the artificial kidney may be lifesaving.

PROGNOSIS

Patients with acute renal insufficiency secondary to chemical toxins have a milder course and regain normal renal function more rapidly than do those whose condition is secondary to traumatic or post-operative shock. This is correlated with the more intense degree of negative nitrogen balance and cellular breakdown in the latter group. The mortality rate has been extremely high in the past. With a sounder understanding of the reversibility of the renal lesion and the pathologic physiology of the acute renal insufficiency, rational treatment has sharply decreased morbidity and mortality.

SUMMARY

Acute renal insufficiency is a syndrome caused by the rapid loss of renal function and is secondary to a variety of precipitating agents. Peripheral vascular collapse due to a diminished circulating blood volume secondary to hemorrhage or dehydration, hemolytic transfusion reactions, and nephrotoxic substances are common etiologic mechanisms. The renal lesion is *reversible*. If life is sustained by proper therapy which stems from a basic understanding of the pathologic physiology, the renal lesion will heal, and recovery will occur.

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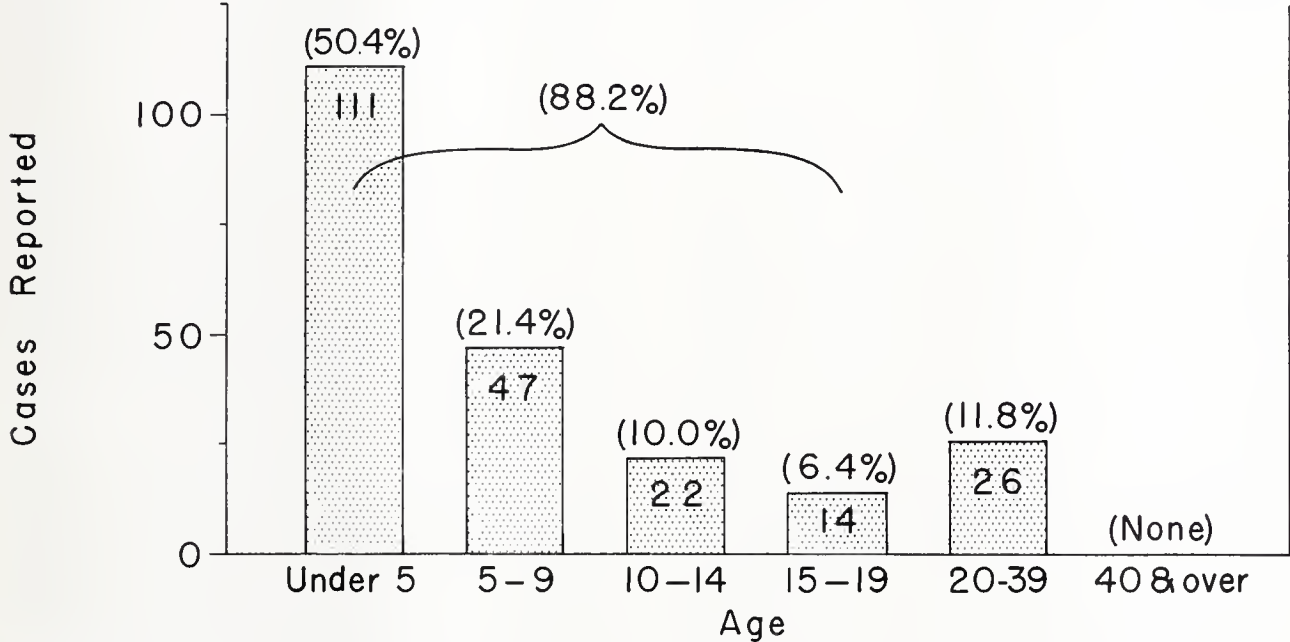
ARKANSAS PUBLIC HEALTH AT A GLANCE

Poliomyelitis Prevention in Arkansas

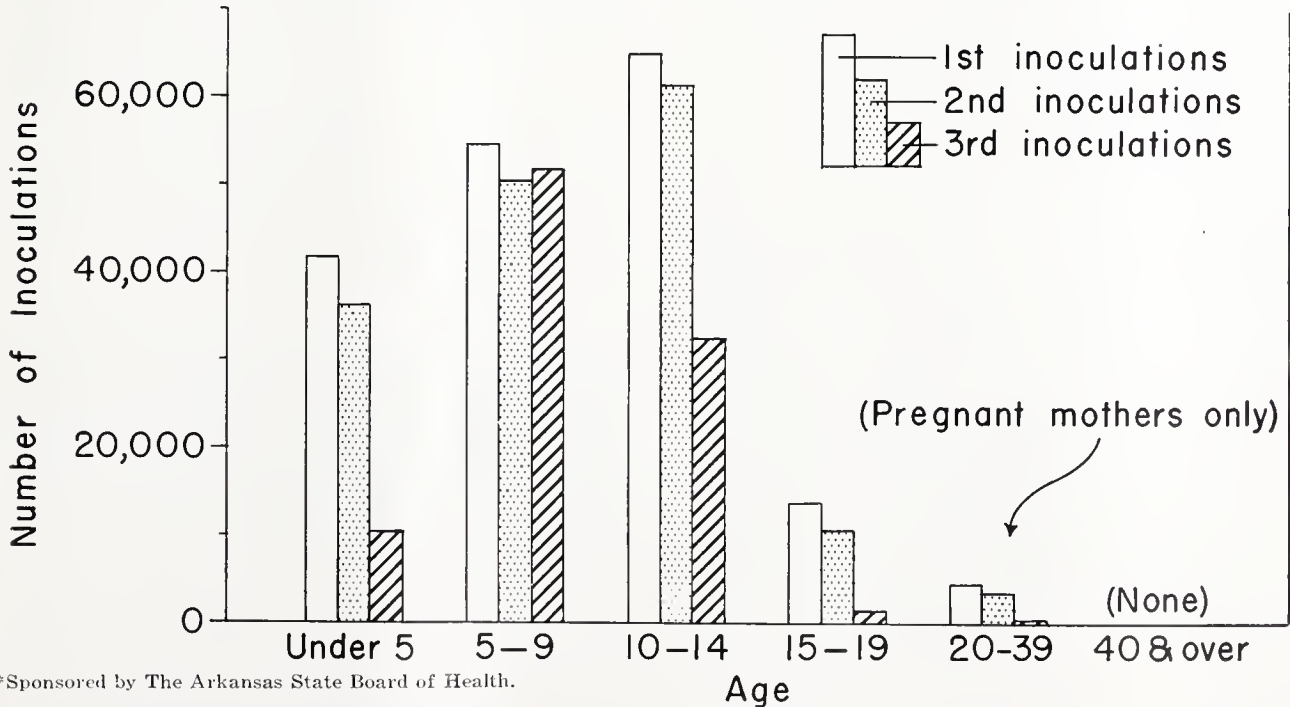
Poliomyelitis vaccine provided by Federal funds has been restricted to persons under 20 years old and pregnant mothers, whose babies may develop severe polio in utero if the mothers contract the disease. The wisdom of this age group allocation is shown by the age distribution of the dis-

ease in 1956. Fully 88% of cases occurred in the age group under 20 years, and none occurred over 40 years. Until statistics show a reversal of this case distribution, intensive effort will still be directed to the age group under 20 years, and particularly under 5 years.

REPORTED CASES OF POLIOMYELITIS IN ARKANSAS BY AGE GROUP DURING 1956



PERSONS RECEIVING FEDERALLY-FINANCED POLIOMYELITIS VACCINE DURING 1956



*Sponsored by The Arkansas State Board of Health.

Editorial

States Rights

GUEST EDITORIAL

FOUNT RICHARDSON, M.D.

Everyone believes in states rights. There are many interpretations as to what rights the sovereign states have in determining their own self-government. However, the high court of the United States has held twice within two years that laws made by the individual states are to be over-ridden by new and changed interpretations of old laws of the United States. The two decisions in question are recognized as the segregation decision and the reversal of "right to work" laws in many states by court decree. To some it seems the intent of the Writers of the Constitution to establish a balance between the legislative and judicial branches of the government is seriously jeopardized.

The decisions are made in the face of Congress in which is invested the right to change and make laws. A citizen has some representation in Congress, but none on the Supreme Court. One would think Congress might be moved to action when the prerogatives of Congress are thus ignored and by passed by the twelve judges. We are not arguing the points of the law. We are definitely and permanently interested in who changes our laws and whether or not we have representation there. We do not have representation on the Supreme Court bench; these twelve judges are appointed for life, not elected.

Many states not affected by the ruling on segregation are aroused by the scrapping of the right-to-work amendment. This case concerned the Railway Labor Act and definitely counteracted laws in 17 states scattered all over the nation. It was no local issue, but it was a decree which contributed to the confiscation of power by the court, to the dismay of state governments throughout the land.

We physicians are interested. We can register our opposition to every Congress-

man, North or South, we are in no mood to stand by and see our state reduced to a mere puppet government. Arkansas doctors will do well to ponder long and thoughtfully on this subject. We may be closer to practicing under directives from Washington than we think.

Eradication of Polio

The American Medical Association board of trustees on December 14, 1956, adopted the following motion:

"The A. M. A. is in favor of encouraging the administration of poliomyelitis vaccine to the public, and is in sympathy with the efforts of those who are endeavoring to educate the public in its use. The A. M. A. will lend its effort, through regular medical channels toward the encouragement of such use by the general public."

Polio vaccine is both safe and effective. It is felt that everyone should be vaccinated particularly those under 40 years. There are adequate supplies of vaccine available.

The A. M. A. is encouraging the county medical societies to take the leadership in pushing this vaccination program.

The Council of the Arkansas Medical Society has approved a vaccination program and urges all members of the society to participate.

Current research indicates that vaccine has been improved during the period it has been available. Evidence has also accrued that other vaccines may prove as good as the Salk vaccine. Oral vaccine is currently undergoing pilot testing.

Despite the expected improvements in polio vaccine, the Salk vaccine gives a substantial protection and it is felt that its wide administration will reduce the members in three categories:—paralytic polio, non-paralytic polio, and carriers.

Encourage your patients to take Salk vaccine.

Medicare Information

The Medicare Program in Arkansas is five times larger than originally estimated. Original plans for financing and processing the claims have been adjusted to satisfactorily handle the unexpected volume.

Claims forms now being received in the Society Headquarters are, as a rule, correctly filled in and only a few claims are being received for physicians' services not covered by the law. These cases are usually due to an attempt by the patient and the physician to equate the Medicare program to health insurance policies or to the physician's desire to save the government money by not hospitalizing a patient for a procedure which can be done in the office.

When a military dependent comes in for treatment, it should be kept in mind that Congress designed the law to protect the government by making it **necessary for the dependent to pay something for Medical Care in every instance.** Most medical care will be paid by the government if the patient is hospitalized for 18 hours or more. In this case, the patient must pay the hospital at least \$25.00. As a general rule, the **government will not pay for outpatient care.** The exceptions to this are pre-hospitalization visits, the management of pregnancy, and the emergency care of fractures, dislocations, lacerations and other wounds. In such instances, the patient is required to pay the first \$15.00 of the doctor's charge plus any cost of diagnostic procedures over \$75.00.

The program was not intended to cover minor surgery, office calls, colds and minor ailments. It was only intended to protect military dependents against the larger costs of major illnesses or serious accidents.

The dependent should be made to clearly understand that the program was not designed to free him completely of all medical costs. He must pay something, either to the doctor or hospital in every case. For minor illnesses, he will save money by coming to you as any other private patient and not trying to bring his case under the government program.

The following is quoted from a letter

from the American Medical Association dated March 5, 1957:

"INTRODUCTION

This is the first of a series of Bulletins since the conclusion of the Medicare contracts to be prepared and distributed to the constituent medical associations under the auspices of the Hamilton Task Force on Medicare of the American Medical Association Board of Trustees. The Task Force consists of Dr. Hugh H. Hussey, Dr. Joseph D. McCarthy, Dr. James R. Reuling and Dr. Edwin S. Hamilton, Chairman.

MEETING OF HAMILTON TASK FORCE

On February 25 the Hamilton Task Force, technical consultants (Mr. S. A. Hildebrand, Mr. George P. Farrell, Mr. R. W. Lyon, Mr. James A. Waggener and Mr. John Steen) and members of the AMA staff met to review the status of the Medicare program and to establish appropriate liaison channels and responsibilities. Following this meeting the entire group met with Major General Paul I. Robinson, members of his staff and liaison representatives of the Department of Health, Education and Welfare and the Defense Department. At this meeting General Robinson presented information concerning the operation of the program. This Medicare Bulletin is devoted primarily to a summary of the information presented.

STATE PARTICIPATION

All constituent associations are participating contractually in the program with the exceptions of Rhode Island, where the Army is paying doctors directly, and Ohio, where the Army has contracted with an insurance company to handle billings and collections. Effective April 1, an arrangement similar to that in Ohio will be in operation in Rhode Island.

NUMBER OF CLAIMS

Up to the date of the February 26 meeting the Army, acting for all uniformed services, received 4,407 physicians' claims from 27 states for a total of \$316,275. Of these claims, 25.5 per cent are for Army dependents, 30.1 per cent for Navy, 41.7

per cent for Air Force, and 2.7 per cent for Public Health Service.

For the first 2,507 hospital claims \$213,-630 has been paid. The hospital claims are divided approximately as follows: 23.6 per cent for Army dependents, 38 per cent for Navy, 35.8 per cent for Air Force and 2.6 per cent for Public Health Service.

TYPES OF CARE ON BASIS OF CLAIMS

A survey of 1,000 medical and surgical claims from seven states shows 22½ per cent for physicians' home, hospital and office calls; 37.4 per cent for deliveries and infant care; 11.9 per cent for gynecologic procedures; 17.5 per cent for tonsillectomies, 1.8 per cent for appendectomies and 8.9 per cent for other classifications.

Eighty-four per cent of these claims were for female dependents.

NON-EXISTENCE OF ABUSE

The Executive Director, Office for Dependents' Medical Care, reported that there had been almost no apparent evidence of overcharging or abuse by physicians, or of fraud on the part of dependents. He indicated that he was delighted with the cooperation he had received from the American Medical Association, the constituent associations and the fiscal agents. Moreover he had absolutely no criticism regarding quality of care.

SPECIAL PROBLEMS

General Robinson's office is experiencing difficulty in administering that portion of the program relating to acute emotional disorders. Medical and hospital care are authorized for acute but not for chronic cases. The problem is to determine when the patient passes from the acute stage to chronicity, as well as the question of transfer to an appropriate facility. A special meeting was scheduled by the Army for February 27 to discuss this difficult question.

Other administrative problems which have confronted the Department are related to chronic illness, elective surgery, dental care, small hospitals ineligible for participation under the present definition of "hospital", and readmission to hospitals after discharge. An extensive correspondence has already been developed on many facets of the program. Obviously Medicare

is in a transition stage. Experience will indicate various changes not now foreseen.

APPROXIMATELY 50 PER CENT OF ALL CLAIM FORMS HAVE HAD TO BE RETURNED TO THEIR SOURCE DUE TO THE ABSENCE OF NECESSARY DATA. Some of this is undoubtedly due to ambiguities in the form. Simplification of the form is now being considered. It is possible that three different claim forms, one for hospitals, another for obstetrics and a third for all other medical and surgical cases, may be developed.

PRESSURES FOR EXPANSION

Suggestions have been made for liberalization of the program to include outpatient care; drugs; infant care for a period of one year; expanded medical care benefit provisions in physicians' offices, and many others. General Robinson indicated that his office has no plans for recommending major changes in the Medicare Program—certainly not until more experience has been accumulated within the present program limits.

The most important change made thus far in the Medicare program is the extension of compensable nursing services from registered nurses to practical nurses. The necessity for such care must be certified by the attending physician. The patient pays the first \$100.00 of the cost of such care and 25 per cent of charges in excess of \$100.

TERMINATION OF GOVERNMENT RESPONSIBILITY

An early task of the Army was to develop a method for terminating government responsibility when the sponsor of a dependent leaves the uniformed service. This procedure has been adopted: It is the commanding officer's responsibility when a man is leaving service to ascertain whether he has a dependent hospitalized in civilian facilities. If hospitalization is involved, the commanding officer immediately wires the information to General Robinson's office. That office then wires the fiscal agents in the state where the hospital is located. Twenty-four hours after word has been sent to the state fiscal agents (excepting Saturdays, Sundays, and Holidays) the federal government's liability for payment ceases.

NEW IDENTIFICATION CARD

A new identification card now being developed will be used for commissaries and all other privileges, including Medicare. These cards will be issued about July 1, by which time, General Robinson estimates, about 2,000,000 dependents will be listed as entitled to care in civilian facilities.

RENEGOTIATION

The Army plans to approve extension of the present contracts in their existing form beyond June 30 and to complete this extension by correspondence. Renegotiation of new contracts will begin in January 1958 and continue throughout the calendar year, five states being renegotiated each month. It is the opinion of our Law Department that it would be wise for the states to ascertain clearly what administrative expenses the Army is willing to underwrite before renegotiation occurs. Any policy questions, in fact, concerning the present fiscal arrangements of the program should be resolved before attempting to negotiate a new contract.

SUMMARY

The Medicare Program is in operation. Dependents are receiving medical and hospital care and physicians and hospitals are being remunerated by fiscal agents on behalf of the federal government.

Renegotiation of new contracts will be carried out in 1958 when the constituent association, fiscal agents and the Army have had sufficient experience to renegotiate intelligently.

Every effort will be made to maintain close liaison between General Robinson's office and the American Medical Association. A center for receipt and dissemination of information and periodic Medicare bulletins under the direction of the Hamilton Task Force has been established in the Office of the Council on Medical Service."

Medicine in the News

American College of Surgeons Booth at Annual State Meeting

The Arkansas Chapter of American College of Surgeons plans to maintain a booth for the showing of medical movies

at the 1957 annual meeting of Arkansas State Medical Society. It is planned to show movies that will be of general medical and surgical interest.

Federal Employee Health Insurance—

The most important bill so far introduced in this Congress regarding federal employee health insurance is one by Rep. Lesinski (D., Mich.) that is sponsored by a federal employees' union. It's essential provisions: The U. S. would pay 50 per cent of the cost of basic or catastrophic health insurance for civilian employees and their spouses and children under 19 years; there would be payroll deductions for the employee's share of premiums; if an employee retires on an annuity after 15 years, the U. S. pays entire cost of premium. An administration bill is expected to be introduced later.

VA sets Up Full-Time Research Posts in Hospitals

With the appointment this month of nine full-time clinical investigators, Veterans Administration is revising its medical research program. Hereafter, according to Dr. J. C. Nunemaker, director of VA education and service in Washington, full-time clinical investigators will be appointed in January and July. Up to now, VA has conducted its research through part-time investigators, who spent the major part of their hours in patient care. Under the new system, each clinical investigator will have research as his primary responsibility and will spend at least three-fourths of his working time on it. Each will be advised by "an outstanding representative of his special field of medicine." The remainder of the researcher's time will be spent on patient care and teaching other physicians. Appointments, some from VA staffs and some from outside, will be for periods of one to three years.

New Medicolegal Film

A new medicolegal film on professional liability will be premiered Wednesday evening, June 5, during the AMA's Annual Meeting in New York City. This film, second in a series of six on various medicolegal problems, is being produced

by the Wm. S. Merrill pharmaceutical company in cooperation with the American Medical Association and the American Bar Association. C. Joseph Stetler, director, AMA Law Department, reports a tremendous interest among both doctors and lawyers in the first film, "The Medical Witness," which was first shown at the 1956 Clinical Session in Seattle.

New Health Institute Proposed: Would Deal in Radiation Problems

Two Oregon Democrats, Senator Neuberger and Rep. Porter, have introduced identical bills to set up the eighth institute at the National Institutes of Health. It would be known as the National Radiation Health Institute and its basic job would be to coordinate research in atomic and nuclear radiation effects on human health. The sponsors said at a press conference that while they had not conferred with officials of the Atomic Energy Commission or the Public Health Service, they felt their proposal would not conflict with work already under way.

Senators Propose Amendment to PA Medical Care Arrangement

In response to requests from a number of states, 19 Senators have introduced a bill to change a social security amendment—scheduled to go into effect July 1—that deals with medical care of public assistance recipients. In essence the new bill would permit states to continue their present medical care programs for public assistance cases without change, and at the same time to use all money available after July 1 under the new program for direct payment to the vendors of medical care.

Most Medical Students Subject To Military Service

Chicago—Military service hangs like a sword over the lives of students enrolled in the country's 76 approved four-year medical schools.

A recent report by the American Medical Association disclosed that 81.5 per cent of all male students enrolled in medical schools during the 1955-56 academic year were subject to military liability.

The number cited as liable for service makes no allowance for physical disabilities and other factors that would render an unknown percentage ineligible for service.

In the 1955-56 year, male students with military liability constituted 81 per cent of the first year class, 82 per cent of the second year, 82.5 of the third year, and 80 per cent of the fourth year group.

Small Children Can Understand Reasons for Hospitalization

Chicago—Any child, even a four-year old, can understand why he is in the hospital if the reasons are explained to him in simple language, three San Francisco researchers said today.

They said in the current (February) Archives of Diseases of Children, published by the American Medical Association, that a study of 100 children between the ages of three and 15 years showed that most of them were frightened and confused about why they were hospitalized, mainly because the reasons had not been adequately explained.

Only 25 children were able to give a good explanation and used medical terms which they understood. They seemed happier and more cooperative and showed that children are able to understand when explanations are given in simple terms, the authors said.

Doctors to Play Part in National Sickness Survey

The nationwide sickness survey scheduled to get under way in May will be reinforced through contacts with a limited number of family physicians, according to Dr. Forrest Linder, survey director. While the project is administered by Public Health Service, the scientifically controlled door-to-door sampling will be done by the Commerce Department's census experts.

The adult answering the door will provide the information, Dr. Linder says, but because of the inability of untrained people to give an accurate medical report, some of the answers will be checked against the family doctor's records.

Folsom Wary of Bill for Free Hospitalization at Age 65

Because it "opens up a problem" and "moves into the area of compulsory health insurance," Secretary Folsom believes the country should go slow on government paid hospitalization at age 65 for OASI beneficiaries. A bill on this subject, originally a Truman-Ewing idea, is now before Congress and has labor support. At a news conference the secretary noted that the social security act had been extensively amended last year, and said "I hope we will not get into it again this year."

Bertner Award to Dr. Bittner

The University of Texas M. D. Anderson Hospital and Tumor Institute will present the 1957 Bertner Foundation Award to John Joseph Bittner, Ph. D., D. Sc., the George Chase Christian Professor of Cancer Research and Director of Cancer Biology in the Department of Pathology at the University of Minnesota Medical School, Minneapolis.

Dr. Bittner will receive the award for his research on the factors involved in the origin of mammary cancer in mice. Beginning with investigation and discovery of the milk factor he proved that inheritance was not the sole cause of the origin of the neoplasm and that a virus was implicated in its origin. Continuing his research he investigated genetic and hormonal factors, proving that interaction of these two, along with the virus or milk factor, was required for the development of this type of cancer in mice.

Mortgage Guarantees for Non-Profit Nursing Homes Studied

Federal Housing Administration officials, charged by Congress last session to help expand housing for the aged, are now studying the possibility of mortgage loan guarantees to non-profit organizations, including hospitals, for construction of nursing homes. As presently contemplated, a facility to be built or altered would have to be separated physically from the hospital. Under the law, patients would have to be age 60 or older and permanent residents of the home.

Also the facility would have to be owned and operated by a non-profit corporation.

7,686 Students Enter Medical Schools

Chicago—Medicine as a profession still has a strong appeal among young people.

A recent report by the American Medical Association shows that 7,686 students, a record number, entered medical schools in the 1955-56 academic year.

Of this number, 5,753, or 75 per cent, had four years of college education.

Tax Booklet Now Available — A 38-page booklet entitled "Federal Income Tax Liability of Physicians" is now available from the A.M.A. Law Department,

The booklet covers many things of interest to physicians in preparing their '57 income tax returns: business entertainment expenses, deductions for expenses incurred in taking post-graduate courses, and deductions for maintaining an office at home.

The booklet is available to physicians in single copies without charge. Small quantities are also available to medical societies wishing to make distribution directly to members upon request.

Life Span of Central Nervous System

The possibility that the life potential of the central nervous system is considerably greater than the average life span in America today was underscored by a recent conference of leading research scientists.

The conference brought together 30 key researchers in the field of neurological and sensory disorders. Dr. Edmund V. Cowdry, research professor of anatomy at Washington University in St. Louis, was honorary chairman for the meeting which was held at the Public Health Service's National Institutes of Health, January 30-February 1 inclusive.

Some of the conferees noted that recent animal studies demonstrate that there is no significant loss of nerve cells due to aging. They suggested that this may indicate that the central nervous

system is capable of life well in excess of the present life span.

New Legislation—Nursing Academy . . . College Scholarship . . . Narcotics . . . VA. Senator Ives (R., N.Y.) in S. J. Res. 30 proposes that an Academy of Nurses be set up within Defense Department so an adequate flow of trained nurses would be available to the military services.

Gifts to Medical Schools

The American Medical Education Foundation wound up its fifth year of operation with a record total of \$1,072,717 in contributions for the country's 83 medical schools. This represents a 41 per cent increase over the previous year.

New AMA Slidefilm Pinpoints Quack Devices

More than a dozen mechanical quack devices and gadgets play the villain in a color slidefilm with sound just released by the AMA Bureau of Investigation. The 15-minute filmstrip, "Mechanical Quackery," is supplemented by narrative description of the devices and the fraudulent uses to which they have been put. It is available—on loan—to medical societies, service and fraternal groups and schools.

National Health Insurance Again Proposed

One of the original sponsors of the 14-year-old health insurance proposal and the son of another co-sponsor have introduced identical bills on the subject in the House and Senate. The measures are S. 844 by Senator Murray (D., Mont.) and H.R. 3764 by Rep. Dingell (D., Mich.). They differ from the original Murray-Wagner-Dingell bill only in their scope. Because some sections have since been enacted into law piecemeal, the 1957 version is minus these features: education of health personnel, medical research, Hill-Burton expansion, aid to rural and shortage areas, more state grants for health work, and grants for maternal and child health.

The bill provides a contributory system of health insurance covering the

working population similar to social security. A separate bill to be introduced later would charge workers 1½ per cent of earnings or up to \$90 a year, with employers contributing an equal amount. The money would go into the U. S. Treasury under a Personal Health Services Account separate from social security but with the Social Security Administration running the program. Covered workers and their families would be eligible for preventive and diagnostic exams, lab and x-ray services, hospitalization up to 60 days, dental services, more expensive drugs, special appliances and eye-glasses. With the government authorized to ask Congress for added funds, total cost (exclusive of medical public assistance) might be \$10 billion.

Announcements

1957 Meeting of American Goiter Association

The 1957 meeting of the American Goiter Association will be held in the Hotel Statler, New York, New York, May 28, 29, and 30, 1957. The program for the three day meeting will consist of papers and discussions dealing with the physiology and diseases of the thyroid gland.

Arkansas Trudeau Society

This year the annual meeting of our Arkansas Trudeau Society will be held on Wednesday evening, May 15, and our group will co-sponsor the medical section of the Annual Meeting of the Arkansas Tuberculosis Association which follows on Thursday and Friday, May 16-17.

Changes in treatment of TB is going to place more and more responsibility on the general practitioner for treatment and care. Our Trudeau Society and the State Tuberculosis Associations will endeavor to bring within the reach of Arkansas residents programs which will be accepted for a AGP credit and which will prove both interesting and informative.

Dear Doctor:

Last fall I conveyed a plea for medicine samples to be sent to various mission hospitals over the world. Many of you responded. I now want to restate the plea, for the demand and need is still so great.

All modern and satisfactory drugs can be used, but especially vitamins, antianemics, antibacterials, antibiotics, antihistamines, antiarthritics, and antispasmodics, analgesics and antipyretics. If you have a particular missionary hospital or Doctor who needs your support, then let this simply be a plea that you send him drugs and whatever other aid is possible as soon as you can—it will not only give to him needed supplies, but your concern and interest will mean even more to him.

However, if you have no direct personal outlet, and wish to cooperate in such a program, then please place your drug samples in a suitable container that can be easily carried, call me at home, MOhawk 65159, and give to me or my wife your name, address and the time when your samples can be obtained.

Thank you so very much — and may God bless you for this consideration.

Sincerely

Joseph Norton MD
5408 Centerwood Rd.
Little Rock, Arkansas
MOhawk 65159

Fifth Class Date Announced for Army's Unusual Military Medicine Course

Starting date will be September 3, 1957 for the fifth class of Military Medicine and Allied Sciences presented annually by the Walter Reed Army Institute of Research to develop highly qualified professional leadership at Army medical research, teaching and treatment centers, Maj. Gen. Silas B. Hays, Surgeon General of the Army, announced today.

Preliminary List of Scientific Exhibits, Annual Meeting, 1957

Plastic Surgery as seen in General Practice—McCarthy DeMere, M.D., Memphis, Tenn.

Techniques of Radical Mastectomy—W. G. Cooper, Jr., M.D., Little Rock, Arkansas.

Strictures of the Common Duct; Etiology, Prevention and Surgical Therapy—Harwell Wilson, M.D., E. H. Storer, M.D., and E. E. Branlitt, M.D., Dept. of Surgery, Univ. of Tennessee, School of Medicine.

Diagnosis of Cervical Malignancy by Means of Vaginal Cytology—C. Gordon Johnson, M.D., Browne-McHardy Clinic, New Orleans, La.

Surgical Diseases of the Adrenal Glands—James W. Headstream, M.D., Little Rock, Arkansas.

A Study of Serum Lipoproteins by Electrophoresis Radioisotope Service—V. A. Hospital, Roosevelt Rd., Little Rock, Arkansas.

Thyroid Scanning as an Aid in Diagnosing Thyroid Disease—Radioisotope Service, V. A. Hospital, Roosevelt Rd., Little Rock, Arkansas.

Urologic Pathology Mimicking Intra-abdominal Conditions—Morton C. Wilson, M.D., Holt - Krock Clinic, Ft. Smith, Arkansas.

Demonstration of Plaster Technique and Traction Apparatus—F. Dixon Conlin, M.D., University of Arkansas, School of Medicine.

Plastic and Reconstructive Surgery—James G. Stuckey, M.D., Little Rock, Arkansas.

Pelvic Pneumography—James W. Buice, M.D., and David M. Gould, M.D., and James Morrison, M.D., Little Rock, Arkansas.

Bronchography—Fred J. Gray M.D., University of Arkansas, School of Medicine.

Results Achieved by Surgery at the State Tuberculosis Sanatorium—Boonville, Arkansas.

Careers in X-ray Technology—University of Arkansas, School of X-ray Technology.

A Visible Tumor Clinic—Calvin J. Dillaha, M.D., and G. Thomas Jansen, M.D., Section of Dermatology, Department of Medicine, University of Arkansas, School of Medicine.

Arkansas Heart Association

Arkansas Physical Therapy Association

Student Loan Fund—University of Arkansas Medical Alumni.

Additional expected exhibitors—tiles unknown:

Kumpuris and Stewart.

Padberg and Cashion.

R. B. Robins, Camden.

The annual St. Louis City Hospital Alumni Association dinner will be held on Wednesday April 24, 1957 at the Le Chateau Restaurant at 10405 Clayton Road, St. Louis County, Mo. The officers for 1957 are as follows: Pres.—Dr. Jos. Peden, Jr.; Vice Pres.—Dr. Wm. Hawker; Treas.—Dr. Lee Hall; Secy.—Dr. Drennan Bailey; Counselors—Dr. Frank Catanzaro and Dr. Francis Trotter.

Postgraduate Conference on Venereal Disease

The 26th Venereal Disease Postgraduate Conference for physicians sponsored by the University of Tennessee College of Medicine, the Public Health Service, and the Tennessee State Department of Health will be held at the College of Medicine in Memphis April 18 - 20, 1957, inclusive. The course is designed to acquaint the practitioner and health officer with the latest developments in the diagnosis, treatment, and management of the venereal diseases. No tuition will be charged. Members of the American Academy of General Practice will be granted twenty units of Category I credit toward the postgraduate educational requirements of the A.A.G.P. for full attendance at this course. The instructional staff for the course will be drawn from university faculties, Public Health Service personnel, and other outstanding authorities in the field.

Applications for admission are to be sent to Dr. Henry Packer, Department of Preventive Medicine, College of Medicine, University of Tennessee, Memphis 3, Tennessee.

Announcement of Regular Corps Examination for Health Educators For the Commissioned Corps of the United States Public Health Service

A competitive examination for appointment of Health Educators as Regular Corps officers in the Commissioned Corps of the United States Public Health Service will be held in a number of places through the country on May 7, 8, 9 and 10, 1957. Candidates will be notified individually of the examination locations. Applications must be received by the Surgeon General, U. S. Public Health Service, Washington 25, D. C., **no later than March 29, 1957.**

Anyone interested in having a scientific exhibit at the meeting of the Arkansas Medical Society in April should contact Lawrence M. Zell, M.D., 937 Donaghey Building, Little Rock, Ark., immediately.

Obituary

Dr. William A. Moore, widely known retired Rogers physician and surgeon, died January 19, 1957, at the Veterans Hospital in Fayetteville. Death followed several years of failing health. Dr. Moore was a veteran of more than 55 years in the practice of medicine and surgery, approximately 50 years of which were in Rogers. About five years before his retirement, Dr. Moore received a gold pin award from the American Medical Association commemorating 50 years of active practice of medicine. Dr. Moore was born and reared in Toronto, Canada, and received his elementary education there. He came to the United States as a young man and enrolled in the school of medicine at the University of Michigan. Later he transferred to the University of Colorado Medical School where he received his degree as a doctor of medicine. Dr. Moore moved to Huntsville in Madison county soon after his graduation and practiced medicine there about five years before going

to Rogers. He was a veteran of World War I, an active member of the Rogers American Legion Post, a member of the American Medical Association, the Arkansas Medical Society and the Benton County Medical Society. He was a member of the Rogers Rotary Club, Central Methodist Church, and the Masonic Lodge. He was also a Knight Templar and a Shriner. Dr. Moore is survived by his wife, Mrs. Alice Moore; a daughter, Mrs. Alleen Parks, Columbia, Mo., and a granddaughter, Miss Jan Parks, Columbia, Mo.

Dr. Fred Youngblood of Huntsville died February 24, 1956, at the age of 80. Dr. Youngblood was born in Marionville, Mo., November 20, 1876. He was graduated from the Beaumont Medical College, St. Louis, Mo., in 1897. He served as a 2nd Lt. in World War I. Dr. Youngblood was a past president and Secretary of the Madison County Medical Society. In 1950, he received his 50 year pin from the Arkansas Medical Society.

Dr. J. Leo Aday, aged 44, a physician and surgeon, died Friday, February 15, 1957, at a Little Rock Hospital. Dr. Aday was a member of the American College of Surgeons, International College of Surgeons, Association of Physicians and Surgeons, American Medical Association, Southwestern Surgical Congress, Pulaski County Medical Society and the Arkansas Medical Society. He was a member of the staffs of St. Vincent's Infirmary and the Arkansas Baptist Hospital. He was a graduate of the University of Arkansas Medical School, class of 1937, and during World War II was an Air Force flight surgeon with the rank of major. He was a member of Immanuel Baptist Church and M. M. Eberts Post 1, American Legion. Survivors include his wife, Mrs. Polly Norris Aday; a son, J. Leo Aday, Jr.; his mother, Mrs. A. O. Aday, and a sister, Mrs. Robert M. Goff all of Little Rock.

PERSONALS AND NEWS ITEMS

Dr. Robert Watson, Little Rock, has been elected chief of the medical staff at Arkansas Baptist Hospital for 1957. He succeeds **Dr. Elvin Shuffield**. The staff also elected **Dr. John William Smith** vice chief and **Dr. Guy Farris**, secretary.

Dr. J. Warren Murry, formerly associated with his father in Texarkana, has moved to Fayetteville and opened his office at 106½ West Center. Dr. Murry's practice will be limited to general and thoracic surgery.

At the Mid-South Postgraduate Medical Assembly held at the Peabody Hotel in Memphis, Tenn., February 12-15, **Dr. J. Max Roy** of Forrest City was elected president-elect. The meeting was well attended by physicians from Arkansas, Mississippi, and Tennessee.

Dr. Paul O. Wright has terminated his lease on the IZard County Hospital in Melbourne and moved to Jacksonville, Ark., where he will practice.

The medical library of the late **Dr. E. E. Barlow** and the late **Dr. B. E. Barlow** has been given to St. Mary's Hospital in Dermott as a memorial. The hospital now has one of the finest hospital medical libraries in the South.

Dr. Jos. A. Buchman and **M. J. Kilbury, Jr.**, announce their association in the practice of general surgery, and the removal of their offices to 1218 West Sixth Street, Little Rock, Ark.

A Beebe physician, **Dr. Neylon David**, was injured in an automobile accident on state Highway 38 about three miles east of Des Arc on January 21. Dr. David collided with another car on a narrow bridge. He was dismissed from a Little Rock hospital February 4, but is still wearing braces and will be unable to resume his practice immediately.

Dr. and Mrs. H. J. Hall of Clinton moved to Little Rock while he served as Van Buren County representative at the session of the Arkansas General Assembly. At 75, Dr. Hall is the oldest member of the House of Representatives.

Recently joining the staff of the Doctors Hospital in Poplar Bluff is **Dr. T. Eugene Ruff**. Dr. Ruff is a diplomate of the American Board of Urology and a member of the American Medical Association. He comes to Poplar Bluff from Paducah, Ky.; however, he is a native of Clay County, Ark.

Dr. Henry G. Hollenberg, a Little Rock surgeon, suffered a broken collar bone and rib fractures in an automobile accident near Lonoke in January. His son, who was driving, was shaken up when their car skidded off the highway and overturned about three times. The accident occurred as the two were returning from a duck hunting trip near Stuttgart.

Dr. and Mrs. J. T. Irby of Earle were honored recently with an open house in celebration of their golden wedding anniversary. Dr. and Mrs. Irby were married in Oakland, Tenn.

Dr. J. M. Walls of Blytheville was injured critically in a traffic accident in which Dr. Walls collided with another car. The accident occurred in January on Highway 61 at McHaney Road.

It has been announced by the Rushton Clinic of Magnolia that **Dr. Charles W. Kelley** is now associated with **Dr. Joe F. Rushton** in the practice of medicine and obstetrics. Dr. Kelley is a native of Magnolia.

PROCEEDINGS OF SOCIETIES

Some recent members of the Sebastian County Medical Society are as follows:

Dr. Robert L. Sherman, Obstetrics and Gynecology

Dr. Elmer Purcell, Internal Medicine

Dr. Walter G. Selakovich, Orthopedics

Dr. Hoyt Kirkpatrick, Jr., Orthopedics

Recently elected president of the Conway County Medical Society was Dr. H. E. Hyder of Morrilton. He succeeds Dr. C. R. Williams. Dr. C. F. Wells was elected secretary. Others attending the meeting included Dr. H. E. Mobley, Dr. J. E. Mobley, Dr. G. B. Owens and Dr. T. H. Hickey.

The Pulaski County Medical Society met Tuesday, February 5 at the University of Arkansas Medical Center. Dinner was served in the school cafeteria. The program period was devoted to a discussion of "National Legislation Affecting Medicine" by Dr. John McDonald, Oklahoma City. Members of the ladies' auxiliary were invited to be special guests for supper and for the scientific and business sessions. Dr. Jerome S. Levy, president, conducted the meeting.

The Arkansas Society for Clinical Hypnosis met February 3, at the Hotel Marion in Little Rock for a business session and to demonstrate how hypnotism works in the medical profession. Dr. T. D. Brown of Little Rock, Society president, said the Society will sponsor a seminar May 31—June 1-2 at the Hotel Lafayette for men in the medical profession. The seminar will be conducted by a forum of men from throughout the country who are well known for their work in hypnosis.

Contributions to the **American Medical Education Foundation** from the state of Arkansas during January 1957:

Dr. R. H. Chappell, Texarkana\$100.00
Dr. Hugh R. Edwards, Searcy 100.00
Dr. Morton C. Wilson, Fort Smith,	25.00
	<hr/>
	\$225.00

The Fifth Councilor District Medical Society endorsed Dr. Garland D. Murphy, Jr., for national commander of the American Legion at a meeting in El Dorado in January. Dr. Carl Moyer, professor of surgery at Washington University, St. Louis was the principal speaker, using as his subject "Surgical Vignettes". A special guest at the meeting was Dr. Gordon Atkinson resident at the Barnes Hospital in St. Louis, whose parents live in El Dorado.

Members of the Greene-Clay County Medical Society heard Dr. Harvill Wilson

of Memphis speak on "Vascular Surgery" at their dinner meeting held in January. Special guests at the meeting held at the Kingsway Club in Paragould were the doctors wives.

Dr. J. N. Thicksten, physician of Alma, was elected president of the Crawford County Medical Society at its regular meeting in January. Dr. A. E. Thorne, Stuttgart, was named vice president, and Dr. M. C. Edds of Mulberry was named secretary-treasurer.

The Ouachita County Medical Society met in regular monthly dinner session Thursday night, February 7, at the Camden Hotel with Dr. Paul Henley as host. The speakers for the evening were Dr. Heinz Faludi and Dr. James Shipp both of Shreveport, La. Dr. Faludi spoke on Cerebrovascular Accidents — Types and Localization. Dr. Shipp's subject was Cerebrovascular Accidents—Management.

The February meeting of the Craighead-Poinsett Medical Society was held at the Hotel Nobel, Jonesboro, with 22 members present. Dr. George Rodkey, Director of the State Sanatorium at Booneville spoke on various phases of work there, the treatment of tuberculosis and answered questions asked by several members. All doctors present expressed their confidence in Dr. Jeff Banks of Little Rock as a teacher of anatomy and voted to endorse him for the position of Professor of Anatomy at the University of Arkansas Medical School.

Woman's Auxiliary

Mrs. T. M. Durham of Hot Springs was hostess to the Garland County Medical Auxiliary in January, with Mrs. John Dodson and Mrs. Vernon Sammons as co-hostesses. Civil Defense in Arkansas was the subject of an address by Richard Holt, Little Rock, assistant director of civil defense in Arkansas. Mr. Holt explained the aims and functions of the program in Arkansas, stressing the great need for such an organization in Hot Springs.

Mrs. Willard G. Creason, representing the local Red Cross chapter, and Col.

James R. Compton, chief of medicine of the Army-Navy Hospital, were special guests.

Dr. H. King Wade, Jr., has been appointed by Garland County Medical Society to serve the auxiliary as medical adviser. Mrs. Lon E. Reed is president of Garland County Auxiliary.

Col. James R. Compton was also guest speaker at Sebastian County Medical Auxiliary in February, speaking on civil defense. Hostesses for the meeting were Mrs. Elmer Purcell and Mrs. James Post. The luncheon meeting was held at the home of the president, Mrs. L. A. Whittaker, Jr., with Mrs. James Thompson in charge of program arrangements.

Mrs. Howard Stern reported on the development of plans for the new addition to Davis Hospital in Pine Bluff at the January meeting of Jefferson County Medical Auxiliary. The meeting was held at the home of Mrs. Allen Russell, with Mrs. O. C. Raney and Mrs. T. E. Townsend serving as co-hostesses. Mrs. Walter Wilkins, Jr., president, named Mrs. Russell, Mrs. John Walker and Mrs. Calvin Simmons to the nominating committee.

Medical legislation was the program emphasis during January for Pulaski County Auxiliary. Mr. Eugene Warren, attorney for the Arkansas Medical Society, was the speaker. Pulaski County Auxiliary held a benefit card party in November with proceeds going to the American Medical Educational Fund.

The thirty-fourth annual convention of the Woman's Auxiliary to the American Medical Association will be held in New York City, June 3 to 7, 1957, with headquarters at the Hotel Roosevelt. All auxiliary members are most cordially invited to attend this 34th annual convention and to take part in the activities of the meeting. The program includes round-table discussions, where auxiliary chairmen and guest speakers will discuss timely auxiliary topics. A block of rooms at the Hotel Roosevelt has been set aside for members of the Woman's Auxiliary. These rooms will be held until April 15, 1957, after which time they will be released to the

housing committee. Make *your* reservation now!

The quarterly state Auxiliary Board Meeting was held January 30, 1957, in Little Rock, at the Blue Cross and Blue Shield building. Mrs. William A. Snodgrass of Little Rock, president of Pulaski County Medical Auxiliary, served as hostess for the meeting, which opened at 10:00 a. m. and continued through luncheon. Mrs. John T. Gray of Jonesboro, chairman of the nominating committee, made a report of the slate of officers for the coming year.

Mrs. Mason Lawson, past president of the national Women's Auxiliary of the American Medical Association and a tireless worker in lay medical activities, was elected the Woman of the Year in Arkansas in 1956.

Today's Health (Hygiea) is published by the American Medical Association and is written for the laity. The Medical Auxiliary to The American Medical Association has been asked to sell it. We are trying to get every doctor and dentist to put it in their reception room.

An individual waiting in a doctor's office has time on his hands. Magazines telling of romance, science and sports, are provided for the patient's entertainment, but people in doctors' waiting rooms are there in search of health, not entertainment.

The more fully the patient comprehends his physical needs the more fully does he cooperate with his physician and the more satisfactory does his treatment become. So the doctors and dentists are operating within their own interests, as well as that of their patients, when they provide office copies of Today's Health.

The objective of Today's Health is: To convey useful information about healthful living, and to do so in an interesting manner; to interpret doctors and patients to each other; to encourage the proper use of good medical service and discourage quackery, pseudo-science and superstition; to promote mental and emotional health, and to enhance joy and satisfaction in living.

You may send your subscription to the American Medical Association: 4 years, \$4.00; 3 years, \$3.25; 2 years, \$2.50; 1 year, \$1.50.

TUBERCULOSIS ABSTRACTS*

Sponsored by
The Arkansas Tuberculosis Association

By Esther L. Batchelder, Ph.D., American Journal of Public Health, October, 1956.

● **Nutrition in the upper age groups has been the subject of intensive research in many parts of the country. The findings shed light on the health problems of this group among which tuberculosis is of increasing importance.**

Information about foods eaten by older people, in relation to their nutritional status, has been coming recently from regional research conducted co-operatively by Western and North Central groups of Experiment Stations and the Human Nutrition Research Branch of the Agricultural Research Service. Studies have been published giving information on people in California, Iowa, Michigan, Missouri, Nebraska, South Dakota and Wisconsin. The Public Health Service and state and local health agencies cooperated actively in the California studies.

The people studied were "well" rather than "sick" people; they ranged in age from 30 to over 90 years; and their food intakes, except for one group, represent those of people managing their own affairs and buying foods and services. Their choices were undoubtedly influenced by levels of income, intelligence, education, experience, habits, and market offerings. *Calcium—and Milk*

Women collaborating in a coordinated metabolic study in five of the North Central states showed the highest average calcium intakes. This group met the National Research Council's allowances, except for the women 70 years or older, whose average fell somewhat below. About one-seventh of them were of low but not indigent economic level, about three-fifths were comfortably situated as

to buying power, and the remainder were of upper socioeconomic status. It seems reasonable to look upon the relatively high average intakes of this group as representing choices of people who could afford to buy milk products and other sources of calcium if they desired.

Women selected, by means of area sampling, as representative of all women 30 years old and over in Iowa and South Dakota, reported diets which for each age decade were considerably lower than the NRC allowances for calcium. A U. S. Department of Agriculture study of homemakers in three cities showed averages similar to the Iowa and South Dakota figures.

To sum up the calcium studies: women representing a cross-section of two mid-western states and three large cities ate on the average, during a 24-hour period, far less calcium than the National Research Council allowances and reported very low intakes of milk. The North Central women collaborating in the metabolic study showed a relatively high average intake, but contained individuals with calcium intakes far below recommended levels.

These findings provide good reasons for public health workers, community nutritionists, teachers, and other leaders to encourage higher calcium intakes. There seems also to be good nutritional, as well as business reasons, for producers and processors of calcium-rich foods, notably milk and cheese, to seek ways of improving products and increasing sales. Products such as the nonfat milk solids in the new fast-dissolving forms are convenient and economical.

Vitamin C—and Fruits and Vegetables

Men and women living in their own homes in San Mateo County, California recorded average intakes of food supplying considerably more vitamin C, or ascorbic acid than the National Research Council allowance. However, men over 60 in the San Mateo County Home had low intakes. Intakes of the women in South Dakota which were somewhat below the allowance for ascorbic acid in all age decades, after 70 years of age averaged only half the recommended intake. The

levels for women in the Midwest, South and Northeast averaged 10 per cent below the allowance.

Availability of citrus fruits and other rich sources of vitamin C on the West Coast would appear to have been a factor in the relatively high average intakes of men and women living at home. Even in California, the institutional diet was low in vitamin C.

The data from South Dakota indicated that more than half the ascorbin acid came from vitamin-rich vegetables and fruits and almost one-third from potatoes. About one-tenth came from other fruits and vegetables. Within the vitamin-rich fruit group, tomatoes were included and were used as much as any other single fruit; peaches came next, followed by oranges, grapefruit and berries. Among the San Mateo County subjects there was a definite relationship between serum ascorbic acid levels and vitamin C intakes and also between the serum levels and lack of teeth or gingivitis. In San Mateo County, serum ascorbic acid levels were lowest for those in the low economic group—the men in the County Home. The people on relief and assistance rolls were somewhat higher, those of the middle income group still higher, and those of the highest income level had the highest serum ascorbic acid levels.

To sum up the vitamin C findings: keeping the serum ascorbic acid high may save teeth. The low levels of intake observed in many parts of the country make it appear that foods rich in vitamin C need to be made more attractive to adults. Availability, cost, convenience are all factors to be explored. Frozen and dried citrus concentrates and other dependable year-round sources of vitamin C may deserve more attention.

Food Intake Patterns

The frequency of designated food groups in the 24-hour intakes was reported by women in the low sample. More than 90 per cent of the women had eaten fats; bread or other cereal products; meat, poultry, or fish. From 70 to 89 per cent had eaten white potatoes and desserts other than fruit. From 50 to 70 per cent had eaten vitamin-rich vegetables and fruits;

other vegetables; eggs, cheese, and legumes; and fluid milk. Less than half had had other fruits. The most popular kinds of foods among the Iowa women were fat, bread, meat, potato, and desserts other than fruit.

In the South Dakota sample 60 per cent of the desserts were "made"—with cakes leading in popularity, cookies and pies next. Total fat in the South Dakota diets was estimated at 40 per cent of the calories, 19 per cent coming from table fats. Whereas there was a decrease of average energy intake with age, there was no consistent drop in the percentage of total calories from major food groups. Sweets and desserts, then cereal products, then table fats accounted for more than 60 per cent of the calories. The popularity of high calorie foods should be considered as nutrition workers attempt to suggest ways to prevent and control overweight through diet.

Overweight has sometimes seemed associated in individual cases with unexpectedly low values for recorded or recalled food intakes. It is often suggested that the low values are actually underestimates (conscious or subconscious) of the actual food eaten. Perhaps where underestimations are reported it is in the quantities assumed as normal servings by the scientists calculating the nutritive value of the diet. For nutritional evaluation of diets the amounts of food must be known. One part of the North Central project was directed toward establishing characteristic sizes of servings through determining the weights of foods eaten. After age 70 decreases were apparent in most portion averages. However, the amounts of sugar and cream added to beverages and the amounts of table fat used increased after the age of 50.

For research workers the findings from these studies provide additional tools for evaluating dietary data, for improving methodology, and for planning new re-

search. For community nutritionists and teachers the information would seem to provide support for continued emphasis on milk and vitamin-rich fruits and vegetables as food sources of nutrients. The data made available should interest those concerned with various aspects of food processing, food service, and food habits.

BOOK REVIEWS

Paper Electro-Phoresis. A Ciba Foundation Symposium. G. E. W. Wolstenholme and Elaine C. P. Millar, Editors. Little, Brown & Co., Boston, Mass. 1956. Pp. 224. \$6.75.

This symposium is not of interest to the general practitioner or specialist unless he is interested in doing research or has considerable intellectual curiosity. On the other hand, it is a splendid introduction and discussion of electro-phoresis for persons interested in laboratory research. This does not mean to imply that there are not a few instances, even now, in which electro-phoresis might not be of clinical value; for example, in multiple myeloma, the blood protein fractions are distinctive when other means of making a diagnosis may be obscure. It is also now well recognized that some abnormal human hemoglobins are associated with clinical syndromes; these hemoglobins can be detected by electro-phoretic methods. Actually, electro-phoresis as defined here is a means of separating different chemical compounds by means of their differences in mobility in an electro-phoretic field. The most recent apparatus for performing this work has been greatly simplified and is within the cost of most laboratories. But as a clinical tool, its use is very restricted.

This book is excellently edited and of great interest to people in this field of research.—A.K.

Bone Structure and Metabolism. Ciba Foundation Symposium. Edited by G. E. W. Wolstenholme and Cecilia M. O'Connor. Little, Brown & Co. Boston, Mass. Pp. 299. \$8.00. 1956.

This Ciba Foundation Symposium devotes most of its attention to research on the anatomy and physiology of bones. There is very little on bone pathology. The book will have great interest to the research worker and considerable interest to those interested in diseases of the bone. Orthopedists will find some chapters in this symposium of value to them such as those on the structure and early development of bones, the mechanism of nutrition in bones, studies on the repair of fractures using P-32, etc. Although this book is easy to read, as it is in almost conversational style, its interest to the general profession is quite limited.—A.K.

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Medical Management of Peptic Ulcer**

JULIAN M. RUFFIN, M.D.*

In the March, 1956, issue of Medical Clinics of North America there appears an article entitled "Recent Advances in the Medical Treatment of Peptic Ulcer." On reading this article, however, it becomes immediately apparent that these "recent advances," for the most part, were described many years ago, indicating that the general principles of treatment enunciated by Sippy in the early twenties are just as valid today as when first written. Like the authors of that communication, I have no recent advances to pass on to you, no new drug or procedure which is the answer to the ulcer problem, no long-range program of therapy which will guarantee against recurrence or complication or will obviate the need for surgery. And yet, in spite of this, it has been my experience that the most spectacular, the most dramatic, and the most gratifying results in the whole field of medicine lie in the treatment of the patient having a peptic ulcer. It is my firm belief that most of our failures in this group of patients are due to improper application of the general principles of treatment with which we are all familiar. These principles of treatment will be referred to briefly, emphasizing certain practical aspects of the ulcer problem and refinements in management which have been found useful over a period of years. Walter Alvarez would probably refer to these as, "Helpful Hints in the Management of Peptic Ulcer;" but for the sake of variety, let us call them, "Minor Clinical Pearls," and discuss them under the following headings:

(1) The Management of Active Ulcer, (2) Indications for Surgery, (3) Late Complications of Surgery, and (4) Long-term Management.

MANAGEMENT OF ACTIVE ULCER

Possibly the most important aspect in the management of any disease is correct diagnosis, and this is particularly true in peptic ulcer. Common errors in diagnosis are both sins of omission and of commission. Many patients having an active ulcer are not treated as such merely because of a negative x-ray. I have made the point repeatedly that a carefully taken history by a well-trained observer takes precedence over any form of examination in the determination of the presence or absence of an active duodenal ulcer. If one can elicit a typical history of ulcer distress, especially if there is a nocturnal component or radiation to the back, the diagnosis of ulcer is justified, in spite of negative x-ray findings, and the patient should be treated accordingly. These statements do not apply to diagnosis of gastric ulcer because of the ever present possibility of carcinoma. The distinction between benign gastric ulcer and carcinoma is beyond the scope of this paper.

On the contrary, a patient often will be treated as having an active ulcer because a clover-leaf deformity of the duodenum has been reported by the radiologist, when in reality the patient's symptoms are due to something totally different. One must remember that the deformity of the duodenal bulb produced by an ulcer is likely to persist throughout life, and, therefore, cannot be taken as evidence of activity.

*Professor of Medicine, Duke University School of Medicine, Durham, North Carolina

**Presented before the Arkansas Medical Society, April 23, 1956

In eliciting the history from an ulcer patient, one must bear in mind that there may be two components to ulcer pain, namely—visceral and somatic. The patient whose pain is mild, confined to the epigastrium and relieved by food or antacids, has visceral pain from an uncomplicated ulcer and is not a surgical problem. On the contrary the patient whose pain is severe and radiates to the back, with a nocturnal component, usually has a penetrating ulcer with involvement of the structures supplied by the intercostal nerves. Such patients have somatic pain from a penetrating or perforated walled-off ulcer and frequently require surgery.

The next problem confronting the physician in the management of ulcer is hospitalization versus ambulatory or home care. Any patient whose pain is severe and radiates to the back or chest wall, or who is awakened at night should be hospitalized if possible. This is especially true of the patient whose pain is continuous and intractable. Obviously, the patient who has had a major hemorrhage will be rushed to a hospital. Many patients, however, will have tarry stools without constitutional symptoms and be treated at home or even on an ambulatory basis. In my experience, this is a dangerous practice and may well result in a fatal hemorrhage. Obviously, the patient who has perforated will be taken immediately to a hospital and likewise the patient who has been vomiting. One other important and often neglected indication for hospitalization is one's environment. A nagging wife, a crying baby, or an uncongenial occupation are hardly conducive to healing of an ulcer.

Conventional therapy for the mild duodenal ulcer consists of the usual bland diet with frequent feedings, antacids, antispasmodics, and sedatives. The use of anticholinergic drugs in such cases is optional. In the more severe ulcer, however, as indicated above, conventional therapy certainly should be supplemented by anticholinergic drugs and the patient should be hospitalized. Anticholinergic drugs given parenterally are highly effective and should always be employed in these cases. They may be given intravenously once daily or intramuscularly every six

hours. In those patients who have been having night pain constant overnight suction frequently will bring about relief. Unless all of these procedures are employed, the patient has not had adequate medical care. If the pain persists after five to seven days of such treatment, surgery should not be delayed.

INDICATIONS FOR SURGERY

For convenience these may be considered under two headings, operations of necessity and operations of election.

A. Operations of Necessity—Under this heading would be (1) closure of a perforation; (2) relief of a complete obstruction; (3) emergency surgery in massive hemorrhage; (4) closure of a gastroenterocolic fistula; and (5) intractable ulcer.

(1) *Closure of a perforation*—Surgery is indicated within the first 24-48 hours after perforation; after this period conservative therapy is advisable because of the high operative mortality.

(2) *Relief of a Complete Obstruction*—High-grade obstruction unrelieved by conservative therapy requires surgery as soon as the patient can be prepared.

(3) *Emergency Surgery in Massive Hemorrhage*—The decision to perform surgery as an emergency procedure in a bleeding ulcer is one of the most difficult problems in medicine. Certainly, the patient who continues to bleed, requiring constant transfusions to prevent shock, should be operated upon without delay. The patient who has repeated massive hemorrhages within a matter of days, in spite of the best care that can be instituted, should also have emergency surgery. Probably the most difficult case of all is the slow bleeder, the patient who does not go into shock but continues to ooze small amounts of blood. It is difficult, sometimes impossible, to determine whether or not the patient has stopped bleeding; the usual methods of determining continual blood loss are only partially reliable.

The demonstration of continued oozing after a period of four to five days of intensive therapy is an indication for surgery. I have frequently made the remark

that given an adequate amount of blood, a competent surgeon and a well-trained anesthetist, no one should die of a bleeding ulcer if he survives long enough to reach a hospital.

(4) *Closure of a Gastroenterocolic Fistula*—A patient having a gastroenterocolic fistula is usually in a poor nutritional state by the time that the diagnosis has been made. Every effort should be made to correct this before attempting surgery.

(5) *Intractable Ulcer*—Intractability is usually due to a walled-off perforation. The patient whose pain persists in spite of the best medical care at one's disposal, including constant suction and parenteral anticholinergic drugs, should have a gastric resection without delay.

B. *Operations of Election*—In discussing operations of election one is reminded of a quotation from Shakespeare in which the thought is expressed that it is sometimes better to "bear those ills we have than fly to others that we know not of." Surgery, like marriage, "is not by any to be entered into unadvisedly or lightly," but only after the most careful consideration, weighing the benefits to be expected from the procedure against the danger, the inconvenience, the expense, and untoward effects of operation.

Under elective procedures should be considered: (1) perforated walled-off ulcer, (2) partial pyloric obstruction, and (3) hemorrhage.

(1) *Perforated Walled-off Ulcer*—The patient with a perforated walled-off ulcer whose pain disappears under hospital care but recurs as soon as he assumes his usual activities is a candidate for elective surgery. A much more difficult problem is the patient who responds to conservative treatment but has frequent recurrences which incapacitate him temporarily. Economic and social factors must be taken into consideration in such cases. Certainly it is unwise to withhold surgery in the patient who is partially incapacitated by his disease when in all likelihood he would be completely rehabilitated by gastric resection.

(2) *Repeated Hemorrhage*—The decision to perform elective surgery in these

cases often is difficult. Contrary to the opinions of some authors, the age of the patient should not materially affect one's thinking. The severity, the frequency, and the character of the bleeding should be the determining factors. The availability of medical facilities and the patient's own reaction to surgery are likewise important considerations. Infrequent episodes of mild hemorrhage do not constitute an indication for surgery. On the contrary, repeated attacks of massive bleeding point clearly to the wisdom of operation, as it is well known that in such patients hemorrhage is likely to recur.

There is a small but important group of patients who have repeated upper intestinal hemorrhage with or without the usual ulcer distress and have completely negative x-rays. It is unwise for the physician to assume that no ulcer is present merely because of a negative x-ray, as 3-5% of duodenal ulcers are not demonstrable radiologically and channel ulcer frequently is missed.

The problem of when to transfuse is an important one. It is my observation that a little hemoglobin on the floor tends to precipitate panic not only in the patient but in the physician as well, and transfusion is immediately started without due consideration of its real need. Transfusion is not indicated in the patient who has gone into mild, transient shock from the loss of a small amount of blood, for in all likelihood the usual treatment will bring him out of shock. On the contrary, the patient who has remained in shock in spite of the usual supportive therapy requires immediate transfusion, though each case must be individualized. A safe rule of thumb in the patient who has lost half of his blood is to transfuse, whereas transfusion is not indicated in levels above 8.5 grams or a hematocrit of 25, unless the patient has some other complicating disease. Preparatory to surgery transfusion is always indicated to bring the blood to nearly normal levels.

(3) *Pyloric Obstruction*—In pyloric obstruction the degree of retention and the size of the stomach are all-important factors. Even though one may have a 100% six-hour retention, if the stomach is not dilated, it is better to assume that

this is due to an acute channel ulcer and such cases should be treated medically with constant suction, parenteral fluids, and anticholinergic drugs given parenterally. The patient whose stomach is dilated and who has a 50% or greater retention surely will come to surgery sooner or later, and it is probably just as well to perform some shunting procedure. If retention is minimal, even though the stomach is slightly dilated, medical therapy should be tried first.

LATE COMPLICATIONS OF SURGERY

Of the late complications following gastric resection, by far the most important is loss of weight, or failure to regain preoperative weight. Many of these people are truly nutritional cripples. In a recent follow-up study conducted at Duke Hospital, over 50% of the patients who had had a gastric resection had significant weight loss. Some investigators have attributed this weight loss to inadequate caloric intake. However, it is our feeling that an error of absorption is the more likely answer.

Using radioactive techniques we found that the absorption of fat in over half of the patients who had had a gastric resection or vagotomy with gastroenterostomy was significantly impaired. It has been stated that those patients who have had a Billroth I anastomosis have less impairment of absorption than those having other types of procedures. However, we have found no significant difference in absorption of fat between the Billroth I group and those patients having other types of operations.

LONG-TERM MANAGEMENT

Although the management of the patient having an active ulcer, with or without complications, is an all-important immediate problem, of equal or even greater importance is the long-term management of the ulcer-bearing patient. Once the ulcer has healed, the perforation closed, the hemorrhage stopped, or the obstruction relieved, the physician is again confronted with the long-range program in the treatment of his patient. What steps should be taken to prevent a recurrence, a perforation or a hemorrhage?

Can one assure the patient that if he follows a prescribed diet, takes medication as directed, avoids alcohol, tobacco and coffee, that he will have no further trouble from his ulcer? Will the administration of anticholinergic drugs, over long periods of time, prevent recurrences and lessen the likelihood of complications? Unfortunately, the answer is, No! In all honesty, one must admit that an ulcer may recur in spite of complete cooperation by a conscientious patient. The patient may expect a recurrence of his ulcer if he is emotionally disturbed or is subjected to undue stress. Nevertheless, careful attention to one's diet, avoidance of all gastric stimulants, a satisfactory social, domestic, occupational, and environmental adjustment tend to reduce the frequency and severity of recurrences.

Continuous and prolonged administration of drugs in the treatment of ulcer is a subject of considerable controversy. While neutralization of acid is an essential feature in the treatment during the active phase, it is doubtful that the continuous administration of antacids is of any particular value in the prevention of recurrences or of complications, and the same general statements apply to most of the antispasmodics. However, patients taking anticholinergic drugs continuously, over a long period of time, have been shown to have better results and fewer or milder recurrences than those taking atropine or a placebo, but, neither the number of complications nor the need for surgery were materially affected by the use of anticholinergic drugs. A practical program for long-term management would be to advise the prompt administration of anticholinergic drugs at the onset of ulcer distress and to continue them for several weeks after subsidence of symptoms, along with the usual medical routine.

Education of the patient concerning the known factors in the pathogenesis of ulcer is of even greater importance than any diet or medication that can be prescribed. The prompt treatment of symptoms when they recur, either at home by the patient himself or preferably in the hospital by a physician, will do much to prevent severe recurrences and serious complications. The patient should be taught to

live at peace with his ulcer and his environment, to accept a partial disability philosophically, to expect recurrences

from time to time and to treat them promptly and intelligently, turning to surgery only as a last resort.



Allergic Reaction to Drugs

ALAN G. CAZORT, M.D. AND THOMAS G. JOHNSTON, M.D.*

By allergic reaction we mean an altered reaction to a specific antigen. This discussion is concerned with altered reactions to drugs. We shall not attempt to discuss such controversial reactions as drug induced thrombocytopenia, agranulocytosis, or aplastic anemia. We are frequently asked whether allergy is increasing. Drug sensitivity is probably the only allergy on the increase. The reasons are obvious in the chemistry of drug synthesis and the greater number of exposures.

SYMPTOMS

Symptoms of drug sensitivity are most commonly manifested by the skin but any system or systems may be involved. The reaction may occur within seconds of exposure or after weeks of incubation. It may range in severity from transient inconvenience to death within minutes or after a lingering progressive illness.

Skin symptoms are by far the most common and usually the most demanding of our skill. Most of this discussion is devoted to them. It is always desirable but at times very difficult to know the offending drug. Frequently the character of the rash and its distribution give us the clue we need. Drug rashes usually can be classified as urticarial or inflammatory. Contact dermatitis is always inflammatory and tissue destruction is a constant character. In this condition, however, only the superficial layers of skin are involved. An urticarial reaction characteristically is reversible. It may occasionally become so intense as to assume inflammatory quality with destruction of deeper tissues. We have seen sloughing of subcutaneous tissue in severe cases of

penicillin reaction (serum sickness type) and once even of lung tissue. This was before we had steroid therapy.

Certain drugs so characteristically cause certain types of lesions that a knowledge of these usual reactions is valuable. Here again we see exceptions. The usual acneiform iodide lesion is familiar to us all. We saw one case initially diagnosed smallpox. It left the patient's skin with pitted scars. Another patient exfoliated for three months after one dose of sodium iodide given intravenously.

Quinine characteristically causes a scarlatiniform rash but many cause urticaria or erythema multiforme. Barbiturates may cause urticaria though the common skin lesion is morbilliform.

Fixed lesions, that is similar lesions recurring in the same areas, always suggest phenolphthalein. Other drugs, as quinine and even aspirin, may do this but rarely, while phenolphthalein does it commonly.

Equanil and Miltown are showing up as common sensitizers. Reactions we are seeing are immediate erythema with fever, purpuric macules, and urticaria. Penicillin and aspirin are prone to cause massive angio edema about the head with pancake hives.

CONTACT DERMATITIS

Contact dermatitis is one of the most common drug allergies for which we physicians are consulted. It is apt to be severe by the time the patient seeks our advice instead of that of Cousin Suzie. Frequent and vicious sensitizers are: Furacin, mercury, pyribenzamine, sulfonamides, penicillin, and all the "caines".

*1425 West Seventh St., Little Rock, Arkansas

There is nothing specifically distinguishing in these cases. One can only say from examining them that the lesions have the characteristic features of contact dermatitis.

The characteristic lesion of contact dermatitis is vesiculation on an inflamed base. It necessarily heals by desquamation. Few drugs are indicated in its treatment. We use Aluminum Subacetate wet packs locally and little else. When these become too drying an unscented unmedicated cream may be used as a softening agent or we frequently use 3% Vioform Cream. We would not quarrel with the man who uses simple normal saline. The essential matters in treatment are to use old well washed cotton sheeting (not rough gauze) and to keep the packs wet. They should be wrung out frequently in water so the solution will not become too hypertonic through evaporation. Only a competent and experienced dermatologist may use grease and he usually does not.

If lesions become infected broad spectrum antibiotics are used, usually internally. Steroid therapy is valuable in reducing inflammation and pruritis. Since only short courses are necessary, we consider it very safe if the patient does not have a disease contraindicating such therapy.

PENICILLIN

Given orally, parenterally, or on a mucous membrane, this drug may cause exfoliative dermatitis, a serum sickness type of illness, or anaphylactic shock. By far the most common is the serum sickness type. It occurs a few days to several weeks after the drug is used. This illness is characterized by rapid development of massive angio edema and pancake hives, frequently with fever and joint symptoms. Rarely the latter may occur without the hives. Although the patient wonders if anyone were ever as sick as he, we are not too concerned about the prognosis. Before steroid therapy we fought it successfully with epinephrine and antihistaminics. We did occasionally see some tissue destruction in the most severe cases. The worst feature it displays is occasionally to become chronic with little remission for months.

It has been postulated with some rationale that these cases get enough penicillin in milk to keep them going. We should think the concentration as high or higher in beef. We have seen no clinical evidence to support this logical speculation.

The diagnosis usually is evident as the symptoms are quite characteristic and the patient or his physician knows of exposure. A physician's wife, however, proved to be the most difficult case we have ever had to solve. Both the patient and her husband were positive in denying any penicillin contact. His job was purely administrative. He handled no medications. On finding her quite dermatographic we told her that penicillin is the only agent we know which will cause the typical course she had followed and leave her dermatographic. She admitted having had a sore throat two weeks before the onset of the rash. Her husband told me exactly what she had taken. Since it was evident that we doubted the accuracy of his statement, he suggested we call the physician who treated her. This physician confirmed the husband's statement but as an after thought added, "Ask her if she used any of the little trochies I gave Dr. X." She had, and each contained 5000 units of penicillin.

Three years after a severe penicillin reaction a patient returned with a repeat performance. He had had his teeth cleaned ten days previously and the dentist admitted spraying his gums with penicillin.

Good therapy is still lots of water, 11,000 aqueous epinephrine p.r.n., and large doses of antihistaminics at regular intervals.

We have seen only one similar reaction to each of terramycin, achromycin, and aureomycin.

ANAPHYLAXIS

It is the immediate anaphylactic reaction which we fear. We produced one in our office a few years ago in a man who had had repeated courses of penicillin. Our sin was carelessness. We did not watch him closely as we do our pollen and other atopy cases. We have treated many cases of atopic shock, but we are

always on the alert for them. Anaphylaxis seems to be an identical reaction. We consider the time element between the onset of symptoms and the administration of adrenalin of the utmost importance. A lapse of 20 seconds is too long. Anaphylaxis is a rapid reaction and only rapid measures are in order. We do not hesitate to give one c.c. 1-1,000 epinephrine at a dose and to repeat it as indicated. We do not object to intravenous antihistaminics or to steroid therapy unless they delay giving epinephrine. The latter is the fastest, the safest, and the most effective treatment at our disposal. Twice in the last year we have seen mention in medical literature of giving aminophylline intravenously for anaphylactic shock. We cannot understand the rationale of giving a vasodilator for a condition which is characterized by extreme vasodilation.

The question in all your minds is "Can this reaction be anticipated?" We think it can, as effectively as we can anticipate a reaction to horse serum, by a simple scratch tests made through a drop of the preparation to be used.

Since our near-fatality we have tested patients routinely with a glycerosaline solution of penicillin, 200,000 units per c.c. We suspect we have tested over 3,000 people. We have seen eight positive reactions which we would interpret as being probably significant clinically. Six of these were in people known to have had anaphylactic reactions whom we called in for the purpose of testing. We have, therefore, picked up only two cases in our routine tests. One of these told us she already knew penicillin would be dangerous for her as she had had to stop helping her husband give it to his cattle. Handling the syringes made her "swell up and smother". Dr. William Browning of Shreveport anticipated such a state in a patient by scratch test. He warned her and called her family physician. Some time later this woman died on the sidewalk just outside another doctor's office a few minutes after a dose of penicillin.

We have seen negative reactions in two people reported to have had anaphylactic shock. Neither had had symptoms of dyspnea, pruritis, nor urticaria. We be-

lieve those reactions to have been syncope. I want to emphasize that the common delayed type of penicillin sensitivity cannot be anticipated by any test; it is only the dangerous, immediate anaphylactic.

ASPIRIN

Aspirin can occasionally cause sudden and severe asthma and quick death. It is a pure uncomplicated atopic asthma and responds at once to aqueous epinephrine. The common reaction to aspirin, however, is massive angio edema of the head and face, usually with peripheral urticaria. These folks frequently complain of indigestion and say they feel as if they have a lump in their chests. Palms and soles are apt to have tender nodules making walking or the use of the hands actually painful.

Aspirin reactors usually are repeaters. For years we have been telling our medical students, "When you see recurrent massive angio edema about the head, with or without peripheral urticaria, consider the cause aspirin until proven otherwise." Patients are rarely satisfied with this diagnosis until they take another dose of aspirin and have a repeat performance. It is inconceivable to most people that aspirin could cause this type of reaction. Almost everybody takes it. Few realize how frequently they take it. Many who take it today will have forgotten it by tomorrow. Few realize until told and sometimes retold that empirin, anacin, bufferin, alkaseltzer, 4-way, etc., contain aspirin.

Never ask the aspirin suspect if he had taken aspirin, a drug, or medicine a few hours before the onset of symptoms. He will get so busy explaining to you why it couldn't possibly be aspirin that he will completely forget even to try to remember whether he had it or not. Ask him rather if he had a sore throat, a headache, a cold, or other minor ailment the day before. If the reply is an affirmative, ask him what he took for it. Maybe he will remember. Also, ask about a roadside hamburger. A little aspirin slipped into ground meats is not detectable and does make it keep its bright red color longer, although the law frowns on such practices.

We have had many interesting experiences with aspirin sensitivity, some of

which make us wonder if "Homo sapiens" is not a misnomer. The woman who has the characteristic symptoms when she menstruates is invariably an aspirin case. For four consecutive months one patient denied having taken aspirin or any other medicine. When caught red-handed her explanation was that she had always taken the little tablet and did not consider it medicine. She didn't know it contained aspirin.

SUMMARY

Many drugs tend to cause characteristic lesions which may help to identify the offending agent.

The dangerous immediate anaphylactic reaction from penicillin can, we believe, be anticipated by a simple scratch test.

Repeated massive angio edema about the head with or without urticaria is most frequently due to aspirin sensitivity.



The Role of the University Hospital in Medical Education**

MR. NELSON EVANS*

Each of you, I am sure, have your own conception of the role of a teaching hospital in medical education. I wonder how many physicians think of this role as being unchanged from the days he or she graduated from medical school. The basic need which established the relationship between the medical school and the teaching hospital many years ago, is still unchanged today—namely that of providing clinical material for the medical student to observe, to record a history, to do a physical, make a diagnosis and suggest a course of treatment. All of this, of course, under close supervision of a senior member of the faculty. Learning by doing and repetition. This is, of course, supplemented with lectures, teaching rounds and conferences. The one basic need of medical education will not change, i. e., the need for an abundance of clinical material. Nevertheless, our medical student of today finds a different emphasis placed on more area of medicine than when many of the physicians here this morning were themselves students. One does not have to look back very many years to recognize many of these changes.

What are some of the trends which have caused this shift and how does the Uni-

versity teaching hospital become involved in changing of medical education.

There is a significant trend toward prevention of disease, both in practice and research activities. Anti-biotics have virtually reduced the amount of infectious diseases that not long ago required special isolation pavilions in hospitals to segregate these patients. Many such pavilions are still in use today. However, are being converted slowly for other purposes. Now we handle our isolation cases more simply, with less emotion to the patient and the family. Many of these patients are not admitted to the hospital, but are cared for at home. One of the more recent examples in the field of preventative medicine is the new polio vaccine which was released to the physicians and the public only last year. As we have more experience with its specific value and have an opportunity to determine the degree of its effectiveness, we will be able to determine somewhat the impact that it will have on hospital facilities. If this is highly successful, it means that we will be able to turn our personnel, facilities and equipment to other areas of medical need. This trend toward preventative care will increase the number of patients treated on ambulatory, diagnostic basis. The number of periodic physical examinations to check on

*Administrator, University of Arkansas School of Medicine, Little Rock, Ark.

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the health status of an individual is growing. This will emphasize the need to expand our comprehensive diagnostic services, for ambulatory patients, in addition to our curative services for hospitalized patients.

We are in an era of expanding health services to the public. More people are receiving more medical benefits from physicians and hospitals than ever before. The average length of hospitalization for patients has declined rapidly in recent years. This means more service for more patients without increased number of hospital beds. We have been expanding our services to the patients. At the same time this has added to the work load of clinical laboratories, x-ray, EKG, medical records, and many other service areas of the hospital which have had to meet the demands of increased number of patients. In a University teaching program, this means that students have more opportunity to see a greater number of patients in the same period of time, thus broadening the amount of his clinical teaching material. There has been another factor at work at this same time, which had had an offsetting effect in the availability of clinical teaching material in many medical centers—namely, with rising economy and the number of people covered by prepaid medical insurance, persons formerly receiving treatment on teaching services in the University Hospitals, are now receiving care from private physicians. Because of this, several leading medical schools are finding it necessary to use private and semi-private patients as an integral part of their teaching program. This is not a problem in Arkansas and will not be for several years to come. As our work load increases in hospitals, the House Staff, or graduate student needs to be carefully supervised, in order that he does not become overburdened with patient service without available time for study, conference and research, if he is inclined in this direction. Each individual physician needs the facilities, atmosphere and time to develop his own professional skills.

There is a marked trend in medical practice, toward dependence on mechanical equipment and technical procedures to

help establish a diagnosis. As a result, the diagnostic and therapeutic services of the Radiology department have increased greatly in recent years. The number of procedures in the clinical laboratory climb yearly. Our demands for these services are growing as our research laboratories develop better techniques for making diagnostic evaluations of an increased number of diseases which we knew little about, a few years ago. This enables the doctor to establish diagnoses and treat the patient more specifically, which results in improved medical care. Our laboratories are already sub-divided by departments—namely, Hematology, Chemistry, Bacteriology, with even sub-specialties in these fields. With the increased use of more radioactive materials for diagnosis and treatment of specific organs of the body, the potential increase in this area is at present unknown. Radioactive cobalt therapy is only in its infancy and money spent today for expensive equipment may tomorrow become obsolete, so rapid are the changes in this area of medicine. New technicians with new skills are developing. All of which will increase the cost of medical care and at the same time, establish the need to centralize expensive diagnostic services.

In the last quarter century, our life expectancy has risen from 57 to 68 years of age. With improved health standards for the American people, our population is living to enjoy retirement, but not without real medical and socio-economic problems. We hear much today about the aging population and its needs. The average age of our patients in hospitals has increased, as would be expected. We constantly operate on patients over 65 years old, with success. The skill of our surgical and medical teams are enabling us to add additional years of life to that already accomplished in the last quarter century.

Speaking of old age, reminds me of a curious tourist who was traveling through the mountains of a neighboring State.

He noticed an aged man sunning himself in front of a general store and inquired: "Just how old are you?" The aged man—"I'm just a hundred", Tourist, "Well, I doubt that you'll see another hundred." Aged man replied (dryly)—"I

ain't so sure about that, I'm stronger now than when I started my first hundred years."

At the present time, we could fill the University Hospital overnight with aging chronic patients, for whom we could do no more than provide nursing care, under medical supervision. If we use limited beds for the patients who require nursing home care or who could receive the treatment on an outpatient basis, the same beds are not available for teaching and treatment of acute medical problems that can be handled on a short term basis. There are limited facilities in Arkansas to care for the aging patient. This is not just Arkansas' problems alone, but a national one. This need requires immediate attention of the physician and responsible State and Community agencies.

While we have been expanding our medical services to the public, we need to examine what has happened to the economic picture in the medical care field, compared to a quarter century ago. I would like to quote briefly from a recent article published in the AMA JOURNAL, entitled "The Economic Position of Medical Care—1929-1953". "While personal consumer expenditures were rising from 79 billion to 230 billion, during the quarter century, those for medical care rose from 2.9 billion to 10 billion. Personal consumer expenditures for food, which have continued to be the largest item in consumer budget, rose from 24.7% to 31.2% of the grand total, whereas the percentage spent for medical care ranged from 3.72% in 1929 to 4.35% in 1953. The phenomenal health progress achieved during this quarter century, probably would have been impossible without the increase in use of the hospital beds. Bearing in mind that there have been tremendous changes in the volume of consumer expenditures during the quarter century, the report points out that it is clear that the medical industry, if we may be forgiven for calling it industry, has continued to occupy about the same economic position as it did a quarter of a century ago. The considera-

ble contribution of medical care to this dynamic quarter century, has been achieved at reasonable cost to the patient. If you have not had an opportunity to review this report, I suggest this as worthwhile reading, even though it is full of charts and statistics.

The role of a teaching hospital in medical education is one which needs constant flexibility and adjustment to meet the changing demands of education while, at the same time, provides facilities to improve our standards of patient care. It is my firm belief that we can not do a good job in teaching medical or nursing students unless we provide (1) qualified instructors, (2) modern facilities in which to conduct this teaching, and (3) high standards of patient care. Education and service go hand in hand and both need to work at a high level together. We have made more progress in building our new University Medical Center and Medical education program than most people realize. Its value to the state can not be measured in terms of operating cost or dollars spent for equipment and facilities. The expenditures must be carefully supervised to enable us to provide the greatest educational benefits and services possible for our dollar as our budget needs increase.

The real value of the Medical Center can only be measured in terms of the service rendered to the people of Arkansas by its graduates. This service may be in terms of instructors for future students, benefits from medicinal research, or actual professional service at a patient's bedside. This is important and needs to be emphasized to many people who are trying to understand how the Medical Center will meet the future educational health needs of the state.

I appreciate the opportunity to be a part of your program and hope each of you will plan to join us on June 7 for our opening of the new hospital and diagnostic clinics.

Thank you.

◆ What's NEW ◆

OPHTHALMOLOGY

JOHN M. FULMER, M.D.*

GLAUCOMA

Tonography—Extensive clinical and research work has been done in the study of glaucoma. The early diagnosis of glaucoma has received considerable attention, especially the glaucoma suspects or "border-line cases." In 1954, following the work of Friedenwald and Grant, the Committee on Standardization of Tonometers of the American Academy of Ophthalmology and Otolaryngology approved a new calibration scale for the tonometer. This scale is considered to be more accurate than the previous ones. The average normal readings are lower than the older scale and correspond to 15 to 18 mm. mercury. The new scale can be used with any Schiøtz tonometer. The clinical significance of the tonometer scale readings has not changed, only their equivalent when transposed to mm. of mercury. Tonography utilizes this new scale in determining the facility of outflow of aqueous.

More routine use is being made of tonography than ever before. At present, it is utilized as a routine procedure in medical centers and, as the technique and interpretations are perfected, its use by every ophthalmologist is anticipated in the future. It has proved to be valuable in the detection of early glaucoma, the nature of the glaucomatous disorders and the diagnosis and evaluation of therapy of glaucoma.

In the treatment of narrow-angle glaucoma, where there may be a question of type of surgery required (Iridectomy or Iridencleisis), tonography is useful between attacks for evaluation of the outflow channels.

In the treatment of wide-angle glaucoma with miotics, tonography has been

used to follow the progression or improvement of the drainage system and may show the early failure of such treatment, in which case surgery may be necessary.

In the treatment of Glaucoma secondary to uveitis with Diamox, tonography may show when Diamox can be safely discontinued.

Diamox—Of eminent importance is the discovery of Diamox and its effect on the intra-ocular pressure.

All previous treatment of glaucoma has been directed toward improving the outflow of aqueous from the eye but with Diamox, an attack upon the inflow of aqueous is possible. The exact mechanism of action of Diamox has not been fully understood but clinically, it has been shown to inhibit the secretion of aqueous into the eye by 50 to 60 percent. The effects of Diamox and miotics are additive.

With the continued wide use of Diamox, it is surprising that so few cases have developed side-effects following its use. The use of Diamox in narrow-angle glaucoma, in conjunction with miotics, has proved to be extremely beneficial in lowering the intra-ocular pressure, thus allowing surgery to be done upon a soft eye. In wide-angle glaucoma, its use with miotics has often delayed or eliminated the need for surgery. This has proved important since the present trend in the treatment of wide-angle glaucoma stresses conservatism. The use of Diamox in the treatment of glaucoma secondary to uveitis has often eliminated the need for surgery.

Diamox has been used in corneal dystrophy to decrease the corneal edema. It also has been used in delayed reformation of the anterior chamber following intra-ocular surgery but its effectiveness is difficult to evaluate.

*509 Waldon Building, Little Rock, Arkansas

The earlier diagnosis of glaucoma and improvement in treatment which has occurred recently will not materially lower the incidence of blindness unless the public is educated to the importance of early diagnosis and adequate follow-up.

RETROLENTAL FIBROPLASIA

In 1941, a new devastating eye disease was discovered—retrolental fibroplasia. It rapidly became the leading cause of blindness in children, resulting in a sharp incline in admissions to blind schools. This disease rapidly replaced congenital cataracts and microphthalmos as the leading cause of blindness among children in blind schools. Fortunately, this trend has been reversed due to the discovery of the cause of retrolental fibroplasia.

The cause of retrolental fibroplasia has been shown to be due to an excess of oxygen. The incidence of retrolental fibroplasia has decreased with the control of oxygen in premature infants. It has been shown that oxygen need not be given as a routine procedure to all premature infants but, of course, to those with cyanosis, respiratory distress, etc. It is anticipated that sporadic cases will be seen in the future, occurring in those premature infants who require large amounts of oxygen as a life-saving measure.

The amount of work involved in the solution of this problem has been tremendous and the results most remarkable. It is not often that one sees the discovery and prevention of a new disease in one's lifetime.

CORNEAL TRANSPLANTS

The storage of corneas to be used in corneal grafting has been a major problem for the average ophthalmologist. Those affiliated with an eye bank have ready access to donor eyes. New methods of preservation of donor material is beginning to offer hope of making donor material available, whenever and wherever needed.

The most encouraging results in preservation have been by dehydration in glycerine, with and without refrigeration. A few cases of successful transplant using this type of donor material have been reported. It remains to be seen, however, whether this technique of preservation

can alleviate the present difficulty of supply and demand.

RETINAL DETACHMENT

The localization of retinal tears, especially those in the far periphery which defy detection by the hand ophthalmoscope, has been enhanced by the use of the binocular ophthalmoscope with the aid of scleral depression, as advocated by Schepens. This technique is difficult to master but informative.

Numerous reports have appeared in the literature describing the technique and results of scleral resection. Its use is limited mostly to those cases with secondary complicating factors such as retinal folds and vitreous bands, which are detrimental to the successful repositioning of the retina to the choroid. A few surgeons are using the scleral resection as a primary procedure on all detachment cases.

Vitreous transplants have been shown to be helpful in the successful treatment of complicated retinal detachments. There are few, if any, complications reported following this procedure and it appears to be more beneficial than the use of air, saline or cerebrospinal fluid. The chief difficulty is its supply.

OPTICAL AIDS

In recent years, the improvement of subnormal vision by magnifiers and other optical aids has been stressed. The individual who had an eye disease resulting in uncorrectable useful vision was often left with a simple hand magnifier as his only aid in reading. This simple device was beneficial in a small number of cases but the remaining cases were devoid of visual aid. New optical devices of various types are now available to aid these people in regaining useful near vision for reading, etc. These optical aids usually consist of magnifying or telescopic glasses which allow the patient to read at a very short distance from the eye (2 to 6 inches). Generally, only one eye is used, as binocular vision at this close range is impractical. These devices are no panacea for poor vision but they may allow a patient to read who never before has been able to do so.

These optical devices are generally intended for reading rather than distant vision.

A TEACHING SEMINAR
FROM THE
UNIVERSITY OF ARKANSAS SCHOOL OF MEDICINE

The Management of Shock

RICHARD V. EBERT, M.D.*

One of the serious problems encountered by the practitioner of medicine is presented by the patient who exhibits the signs of shock. For this reason it may be worthwhile to review the modern concepts of the pathogenesis of shock together with present methods of treatment.

In any discussion of shock definition of the term is essential. Many authors have defined shock in such a way as to restrict the usage to a specific mechanism such as decreased blood volume. In general use by physicians the term shock defines a clinical picture without regard to the pathogenesis of the syndrome. The syndrome consists of pallor, cold extremities, sweating, apathy, tachycardia and hypotension. The presence of hypotension is essential to the meaning of the syndrome for this implies failure of the circulation.

Shock can occur in association with a variety of diseases and may be produced by several mechanisms. To illustrate the problems presented by shock I will discuss shock precipitated by three entirely different events, namely, hemorrhage, severe infection and myocardial infarction.

Shock associated with hemorrhage may occur as a result of trauma or spontaneous hemorrhage. As a result of trauma, hemorrhage may occur externally, into the tissues or into the body cavities. There is general agreement that shock associated with trauma is precipitated by hemorrhage and that the severity of the shock is proportional to the amount of blood lost. Loss of plasma alone seems much less important than the loss of whole blood in most injuries. Burns are an obvious exception. There is no good evidence that toxic substances liberated from damaged tissues play an important role in precipitating traumatic shock.

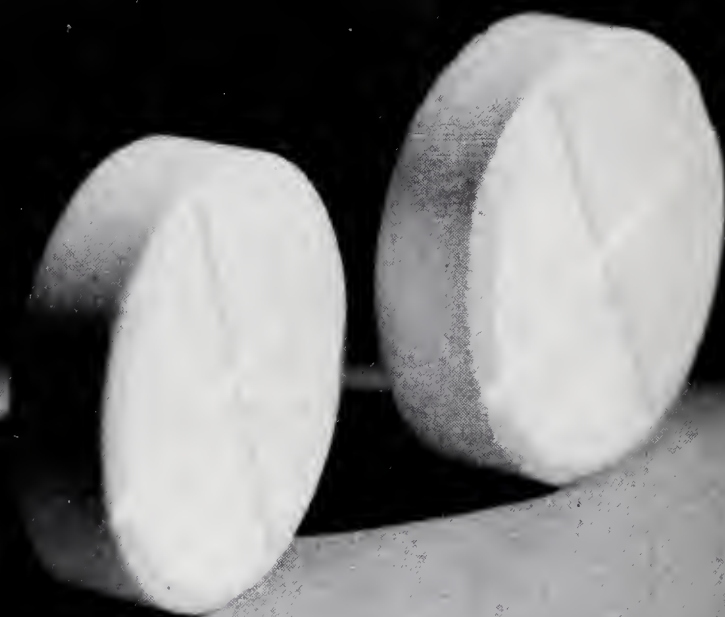
The therapy of shock resulting from hemorrhage is, of course, blood transfusion. The amount of blood administered will depend on the magnitude of the blood volume deficit. Determinations of blood volume in patients with severe traumatic shock have shown that the usual blood volume deficit is 40% of the total blood volume. This is approximately 2 liters in the adult man of average size. The response of the blood pressure is an excellent guide to the response to therapy. If the blood pressure fails to rise or if there is a secondary fall, continued hemorrhage should be suspected. It may be necessary to attack the source of bleeding surgically if therapy is to be successful.

If blood is not available plasma, dextran or large amounts of saline solution may be used to correct the blood volume deficit. All of these have the disadvantage of increasing the plasma volume without increasing the red cell volume. As a result they inevitably lead to anemia because of the dilution of the remaining erythrocytes. Their chief use is to tide the patient over the initial period of shock while blood is being obtained. Dextran is a high molecular weight polysaccharide. It is particularly valuable for emergency use because it is stable and can be kept at room temperature for indefinite periods of time. It is nontoxic and allergic reactions are rare. Dextran is an effective plasma volume expander.

It is my belief that vasoconstrictor agents have little or no place in the initial management of hemorrhagic or traumatic shock. Obviously these drugs do nothing to correct the underlying defect, which is a deficit in blood volume. By increasing the blood pressure they obscure the picture by removing a useful sign of decreased blood volume, and create a false sense of security. Later in the course of

*From the Department of Medicine, University of Arkansas Medical Center, Little Rock, Arkansas

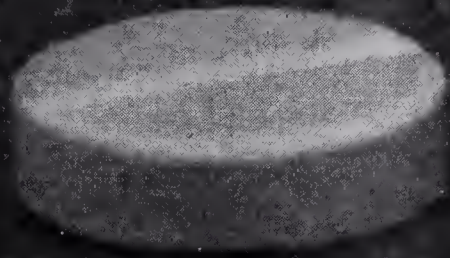
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is here
today**



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SULFAMETHOXYPYRIDAZINE LEDERLE

**an entirely new, readily soluble,
single sulfonamide exhibiting
excellent antibacterial action
at radically reduced dosage**

KYNEX SETS A NEW STANDARD FOR SULFA THERAPY



cuts dosage 75%

LOW DOSAGE: a total maintenance dose of only 2 tablets daily.

SOLUBILITY: prompt absorption, ready diffusion into body fluid and tissue.

PROLONGED ACTION: therapeutic blood levels within the hour, blood concentration peaks within 2 hours—5-10 mg. per cent blood levels persist 24 hours after a single oral dose of 1 Gm.

BROAD-RANGE EFFECTIVENESS: KYNEX is particularly efficient in urinary tract infections due to sulfonamide-sensitive organisms, including *E. coli*, *Aerobacter aerogenes*, paracolon bacilli, streptococci, staphylococci, Gram-negative rods, diphtheroides and Gram-positive cocci.

SAFETY: KYNEX offers a margin of clinical safety based on low required dosage, solubility, slow excretion rate. Although KYNEX Sulfamethoxypyridazine is a sulfonamide derivative and the usual precautions regarding such drugs should be observed, the low daily dose of 1.0 Gm. is all that is required for therapeutic blood levels. No increase in dosage is recommended.

CONVENIENCE: The low adult dose of 1 Gm. (2 tablets) per day offers optimal convenience and acceptance to patients.

TABLETS: Each contains 0.5 Gm. (7½ grains) sulfamethoxypyridazine. Bottles of 24 and 100.

SYRUP: Each teaspoonful (5 cc.) contains 250 mg. sulfamethoxypyridazine. Bottle of 4 fl. oz.

*REG. U. S. PAT. OFF.

LEDERLE LABORATORIES DIVISION, AMERICAN CYANAMID COMPANY, PEARL RIVER, NEW YORK



the illness if hypotension develops as a result of infection, anesthesia or other complications these drugs may prove of value.

A serious problem is presented by traumatic shock which fails to respond to transfusion therapy. As mentioned earlier continued hemorrhage may lead to failure of therapy. Injury to the central nervous system, extensive contamination of the peritoneal cavity with bowel contents, or hypoxia on the basis of injury to the lungs may play an important role. Finally there is evidence from animal experiments that prolonged severe hypotension leads to shock which no longer responds to transfusion. Recent experiments indicate that this is related to decrease in blood flow to the intestines. One theory is that this leads to absorption of endotoxin produced by intestinal bacteria.

Perhaps the most feared complication of shock is acute renal failure as a result of injury to the renal tubules. The urinary output of all patients in shock should be observed closely. If urinary flow fails to return to normal with response of the blood pressure to therapy this complication should be suspected. It is essential that excessive fluids not be given if acute renal failure develops. If fluids are restricted adequately most of these patients will recover.

Shock associated with bacterial infection presents quite a different problem from hemorrhagic shock. Bacterial shock occurs most commonly in bacteremia particularly if the gram negative organisms are the offending agent. The commonest site of origin of the infection is the genitourinary tract. Bacteremia is particularly apt to follow instrumentation of the urethra. The shock of meningococcemia falls in this category. The clinical picture is very similar to that of hemorrhagic shock. The only difference is that the rectal temperature is usually but not always elevated. In spite of this the extremities may be cold. Bacteremia is in my experience the most common cause of shock of obscure nature.

Bacterial shock differs from hemorrhagic shock in that a deficit in blood volume is not the primary mechanism. Rather there appears to be damage to the blood

vessels with consequent venous dilatation and impaired venous return to the heart. This damage is apparently caused by endotoxin. By endotoxin is meant substances of a polysaccharide or protein nature which are present in bacterial cells. Minute amounts of these substances are extremely toxic to the animal body. One of their chief sites of action is the vascular system.

The treatment of bacterial shock differs from that of shock associated with hemorrhage. Hypovolemia if present should be corrected. There appears to be a synergism between the effect of endotoxin in the vascular system and hypovolemia. This is seen in peritonitis where both factors contribute to the shock. Caution should be exercised in administering fluids for excessive fluids may lead to pulmonary edema.

The most important aspect of therapy is the treatment of the bacterial infection. If the exact nature of the organism is not known one or more of the broad spectrum antibiotics should be used. These should be administered intravenously. The vasoconstrictor drugs have an important place in the management of this type of shock. The most effective is norepinephrin (levophed). This must be given intravenously. Great care must be used to avoid the fluid extravasating into the subcutaneous tissues as this will cause a slough. One or more ampules are emptied into a liter of 5 per cent glucose solution or physiologic saline. The drip is then adjusted to an amount which maintains the arterial pressure at a reasonable level. Care should be taken to prevent the administration of excessive fluids especially if the urinary output is inadequate. More ampules of norepinephrin should be added to the solution if necessary rather than increasing the amount of fluid.

The role of the adrenal cortical hormones in the management of bacterial shock is not entirely clear. Under most circumstances they do not appear to be indicated. Certainly adrenal cortical insufficiency does not appear to play an important role in the production of shock except possibly in the Waterhouse-Friedrichsen syndrome. In desperate cases intravenous hydrocortisone may be tried.

The presence of shock in myocardial infarction implies a grave prognosis. The mechanism of production of shock is different from bacterial or hemorrhagic shock. Neither damage to the vascular system nor decrease in blood volume appear to be important factors. Rather the shock is secondary to massive damage to the myocardium with a consequent decrease in stroke volume of the heart. Pulmonary edema is often associated. The systemic venous pressure may be normal or may be elevated.

Therapy of shock with myocardial infarction is difficult and the mortality is high. Oxygen should always be administered because of the high incidence of associated pulmonary edema and consequent decrease in the oxygen saturation of the arterial blood. In my estimation transfusions of blood or plasma should not be given because of the danger of enhancing pulmonary edema. Vasoconstrictor drugs may be useful and if administered properly appear to lower mortality. Their chief value lies in maintaining coronary perfusion by preventing an extreme fall in blood pressure. There is probably no need to use vasoconstrictors unless the systolic arterial pressure falls below 85 mm. Hg. systolic. I prefer the use of norepinephrin. Again caution should be used to keep the amount of intravenous fluid to a minimum especially if urinary output is low. The pressure should not be raised to high levels as this increases the work of the heart and is deleterious. Maintaining a pressure of 90 to 110 mm. systolic is adequate. The administration of norepinephrin should be reduced or stopped at the earliest possible moment.

While in theory digitalis should be helpful in the shock of myocardial infarction in practice it appears to have little value. There is probably some danger in the administration of excessive amounts of digitalis to these patients because of their proneness to ventricular arrhythmias.

In summary the management of shock should be based on the underlying mechanism. This will depend in turn on the precipitating factor whether hemorrhage, bacterial infection or myocardial infarction. I have not touched on some of the other causes of shock such as burns, massive loss of fluid and electrolytes, adrenal

cortical insufficiency, anesthesia or pulmonary embolism. The principles of therapy in these instances will be the same.

Resolution

DR. J. LEO ADAY

God in His infinite wisdom has called to Himself our beloved colleague, Dr. J. Leo Aday. Dr. Aday passed away on February 15, 1957, at the age of 44. He was born at Marshall, Arkansas, and graduated from the University of Arkansas School of Medicine in 1937. Since 1937 he had been a member of the Pulaski County Medical Society, Arkansas Medical Society, and American Medical Association. At the time of his death, he was also a member of the Southwest Surgical Congress. He served two years in the Air Force in World War II and was a member of M. M. Eberts Post No. 1, American Legion.

Despite the relatively brief number of years he was privileged to practice, Dr. Aday earned an unusually large number of loyal friends through his innate goodness of heart and his sympathetic understanding of human travails. He was most conscientious; and his untiring devotion to, and regard for, his patients reflected his purpose of mind as expressed in the Physicians Prayer: "Give skill to my hand, clear vision to my mind, kindness and sympathy to my heart. Give me singleness of purpose, strength to lift at least a part of the burden of my suffering fellowmen, and a true realization of the privilege that is mine."

Be it resolved that the Pulaski County Medical Society express to his family our heartfelt sympathy at the untimely loss which it has sustained.

Be it further resolved that a copy of this resolution be made a record in the minutes of the Pulaski County Medical Society, that a copy be sent to the family and a copy to the Journal of the Arkansas Medical Society.

Daniel H. Autry, Chairman
Hal Dildy
W. M. Hamilton

ARKANSAS PUBLIC HEALTH AT A GLANCE

RABIES CONTROL IN ARKANSAS, 1956

Rabies occurs in a wide range of natural hosts in Arkansas, and may assume epizootic proportions, as it did among skunks in Pope County this year. Because the disease occurs so widely in nature, it is most difficult to eradicate. Its continued control is therefore all the more important. The principal animal that transmits rabies to man is the dog, and the dog also spreads the disease most widely in nature because dogs move about so much with people. Yearly vaccination of all dogs against rabies by veterinarians will virtually remove danger to people, and reduce economic loss to farmers from rabies in cattle.

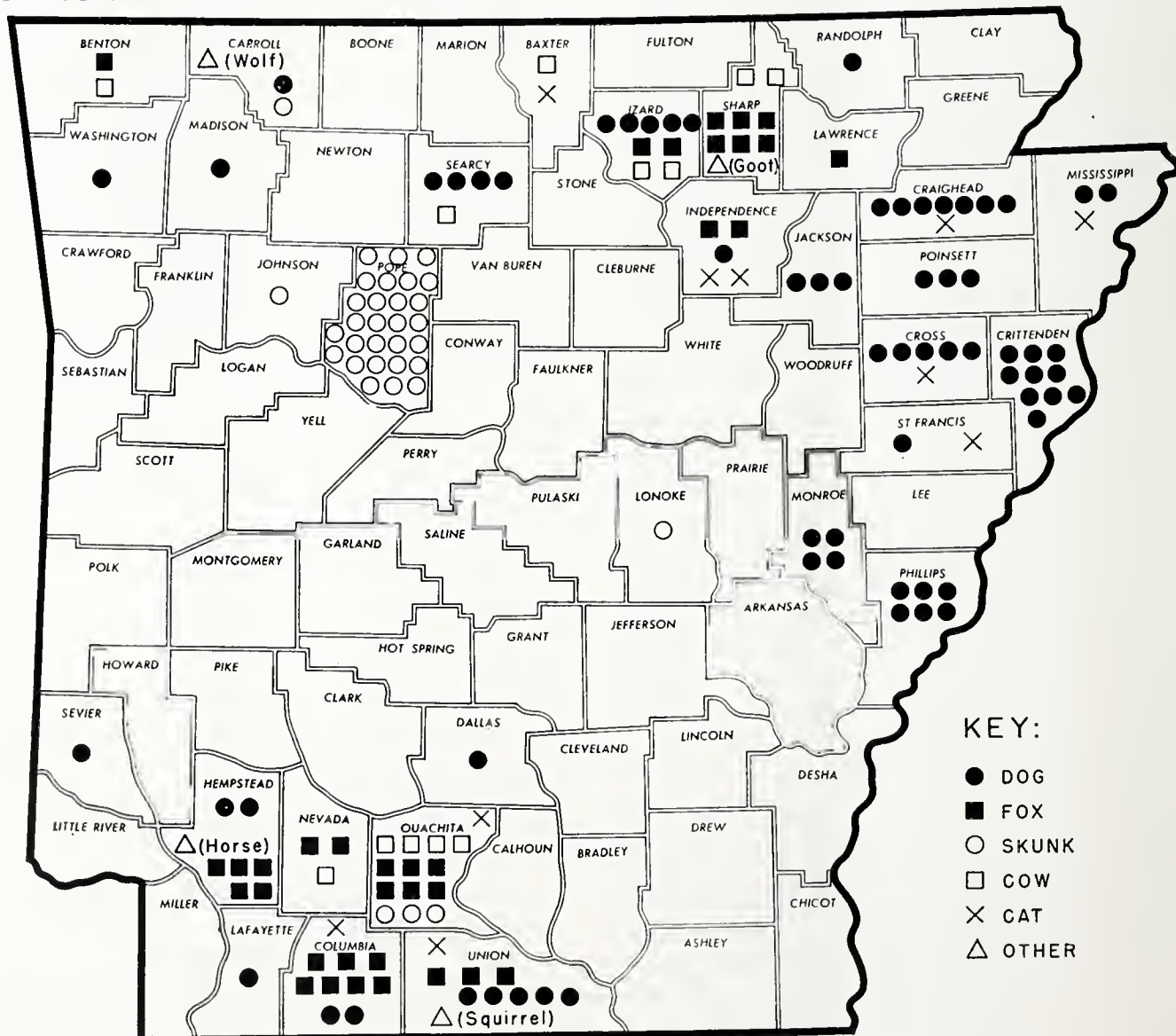
The State Hygienic Laboratory of the Arkansas State Board of Health examines hundreds of animal heads brought to Little Rock each year. 841 animal brains have been shown positive for Negri bodies in the last five years.

The State Health Department purchases and makes available Rabies Vaccine (Semple type) at cost, to physicians, for treat-

ment of persons bitten by rabid or possibly rabid animals. 1,643 packages (7 doses each) of this vaccine were issued to local health units in the last fiscal year, valued at \$4,107.50, of which 953 packages were returned unused. Antirabies (Horse) Serum was introduced midway in 1956, available only directly from the State Health Department. 33 units have been issued. This Antirabies Serum should always be given immediately, in addition to the vaccine, to persons bitten on the head, neck and arms, because the incubation period of rabies can be so short in these cases that the virus establishes itself before antibodies from the vaccine are developed.

Laboratory-Proven Rabies in Animals in Arkansas, 1952-1956

	1952	1953	1954	1955	1956
Dog	167	130	133	57	70
Fox	16	24	22	35	35
Cow	13	17	22	11	12
Cat	3	6	5	5	10
Skunk	0	2	1	1	32
Other	0	2	4	3	3



Editorial

ENZYMES AND DIAGNOSIS

There is a notable surge of interest in the study of enzymes both as a diagnostic and investigative tool. It was hoped that the different biological goal of the various body organs would reflect itself in a distinctive chemical substance or pattern. The corollary, if this is true, would be that a diseased organ might release chemical substances into the blood stream which would be diagnostic of the organ of origin and perhaps even the disease process. To some extent this hope is being realized. Although most organs have common enzymes with other organs, the concentration of some enzymes is so much greater in one organ than another that injury to the organ with the high enzyme concentration may release into the blood stream diagnostic quantities of the given enzymes.

Currently, much effort is being expended in enzymology to develop a confirmatory test for acute myocardial infarction, which as is well known, may occur without significant changes in the electrocardiogram or diagnostic tests. The glutamic oxaloacetic aminophorase test commonly known as the transaminase test was devised to try and detect myocardial infarction; the heart is a rich source of transaminase and when injured releases large quantities into the blood stream. The actual value of the test has been recently reviewed in the *Journal of the American Medical Association*, (Dennery et. al., Vol. 161, page 614, June 16, 1956), and elsewhere. The former authors found the serum transaminase elevated in most cases but unfortunately there were 4.75% false negatives in this small series. Even more discouraging is the fact that "false positives" were obtained with other tissue necrosis as liver disease, acute pancreatitis, and pulmonary embolism. Despite these drawbacks, the transaminase test is still new and may be developed into a worthwhile clinical test. Other

enzymes released by injured myocardium in significant amounts are: malic dehydrogenase, phosphohexose isomerase, fructose aldose, etc. (Bing et. al., *American Journal of Medical Sciences*, Vol. 232, page 533, November, 1956). In fact, White favors estimations of the serum lactic dehydrogenase over the transaminase test as a means of detecting heart injury; he regards the transaminase test as of little value (*New England Journal of Medicine*, Vol. 255, page 984, November 22, 1956). Wacker and his associates (*New England Journal of Medicine*, Vol. 255, page 450, September 6, 1956) also feel the malic and lactic dehydrogenase tests are valuable in infarction; in their article, they make the further interesting observation that these enzymes contain zinc and that after infarction the serum zinc level falls.

Although the transaminase test is not yet on a firm footing for diagnosing myocardial infarction, it appears to be a very sensitive test for evaluating hepatocellular damage in acute hepatitis (Wroblewski et. al., *Annals of Internal Medicine*, Vol. 45, page 782 and page 801, November, 1956). A variation of the transamine test (which is as noted above the serum glutamic oxaloacetic transaminase evaluation or GO-T test) is the glutamic pyruvic transaminase test (GP-T). This latter enzyme has a relatively low concentration in heart muscle and a high concentration in liver. Serum GP-T test has been studied as an index of liver disease and was found by Wroblewski to be even superior to GO-T in evaluating liver disease; he believes that simultaneous GO-T (which is a more sensitive test of chronic liver disease) and GP-T (which is increased greatly by acute hepatitis) may enable one to differentiate acute and chronic liver disease; further more GP-T has the additional asset of tending to remain stable in myocardial infarction.

Diagnosis by blood enzyme tests may hold an important future in medicine.

Medicine in the News

Burney Sees Current Polio Vaccine Shortage Easing by Mid-April

Surgeon General Burney concedes there's a "crisis" in poliomyelitis vaccine supplies now but believes the shortage will begin easing up around April 15. The Public Health Service chief was called before a House Government Operations sub-committee which said it wanted to find out about the "feast-and-famine" aspect of Salk vaccine. Dr. Burney attributed the current short supply to an "almost precipitous" increase in sales in the past few weeks.

Defense Department Prepares Doctor Amendment to Draft Act

Defense Department, preparing for expiration of the special doctor draft act next June 30, is moving ahead with legislation to amend the regular draft act so that physicians may be called up selectively. The bill is now before the Budget Bureau, which is expected to clear it soon for presentation to Capitol Hill.

The proposed amendment would in effect waive the Selective Service Act's prohibition against discrimination to the extent that physicians, dentists and allied scientists could be called up by their professional classification. Thus these men, because they are in the particular professional groups, would be subject to special calls and not necessarily inducted in the same order as others in their same age group.

House Committee Approves All Funds Requested for NIH.

In reporting out the budget for the Department of Health, Education and Welfare, the House Appropriations Committee yesterday (March 21) reduced some other funds, but left intact the totals recommended by the Budget Bureau for the National Institutes of Health and the Hill-Burton hospital construction program. Approved were the following (the same or about same as current spending unless otherwise indicated): general re-

search and services, \$14 million, up \$2 million; cancer, \$46.9 million; mental health, \$35 million; heart research, \$33.4 million; dental research, \$6.4 million, up \$.4 million; arthritis and metabolic diseases, \$17.8 million, up \$2 million; allergy and infectious diseases, \$17.4 million, up \$4 million; and neurology and blindness, \$18.8 million.

A total of \$121.2 million was approved for Hill-Burton grants, down \$4 million; \$45 million for vocational rehabilitation work, up \$7 million; \$30 million for medical research facilities construction; \$19.5 million for PHS general grants to states, up \$2 million; \$44 million for PHS hospital-medical care, up \$5 million; \$40 million for Indian health activity. Amounts asked, or approximately, were approved for Alaskan mental health; control of venereal disease, tuberculosis, and communicable disease; grants for water pollution control; funds to operate the National Library of Medicine; and money for Sanitary Engineering activity. Food and Drug Administration's request for \$9.3 million was approved in full.

Army Announces Largest Medical Intern Training Group

Army hospitals in this country and overseas will welcome 164 graduates from 71 approved medical schools as interns for the year beginning July 1. The interns represent all sections of the United States and were selected by the Army Medical Service in participation with the sixth National Intern Matching Program.

This is the largest number of medical interns to be admitted at one time by the Army Medical Service since the establishment of such training. These physicians will be commissioned 1st lieutenants in the Army Medical Corps upon entering the service and at the close of the one year internship will become captains if they remain in the service.

Veterans Administration — \$702 million for in-patient care left intact and \$79 million for out-patient care, but the House cut \$7.5 million for hospital construction and replacement, leaving \$42.5 million available in this category. The

committee was critical of some VA hospitals, commenting: "The country wants good, useable and substantial buildings for veterans hospitals; it does not want the gingerbread and waste that often characterizes VA hospital construction. To the committee's knowledge, many of the VA hospitals are too plush . . . The committee wants the VA to evaluate its plans and specifications looking toward reduction in costs and toward better and more useable buildings."

'Catastrophic Policies for U. S. Workers Still Under Consideration

The Civil Service Commission, attempting to work out a program of voluntary health insurance for federal civilian employees, still is considering financing catastrophic (major medical) coverage by tapping a surplus that is building up in the employees' life insurance system. This was brought out with the publication of the transcript of hearings before the House Appropriations Committee.

While not brought out at the hearing, it is understood the commission still is reluctant to propose a joint basic and catastrophic insurance "package" because of the cost and because the White House has not yet given the o. k. on payroll deductions for basic insurance, generally regarded as necessary to make basic coverage practicable. American Hospital Association also is drafting a bill that is expected to provide for both basic and catastrophic insurance, with the federal government paying half (or more) of the costs of both types of coverage and making use of payroll deductions.

Educators Differ on Army Granting Graduate Degrees

Some segments of higher education are opposing an Army-backed bill giving Walter Reed Army Institute of Research authority to award "master of science, master of public health; and doctors of science degrees in medicine, dentistry, veterinary medicine, and in the biological sciences involved in health services." The bill (H. R. 3516) already had been reported favorably by the Kilday subcommittee of the House Armed Services Committee following hearings. Then the

subcommittee decided to reconsider after receiving several protests, including one from Dr. Nathan Pusey, president of Harvard University, who wrote that enactment "will surely debase the established academic currency of all American universities."

Medical Education Leaders Discuss Future Programs

Dr. Herman Weiskotten, Skaneateles, N. Y., retiring chairman of the Council, defended current medical education while pointing out future needs.

Dr. Weiskotten said critics of medical schools generally have no firsthand information and are usually persons with "special interests" in socio-economic, psychological or public health fields.

He said the provision of full time competent faculties, properly equipped laboratories, and the expansion of research in schools have provided an atmosphere "of untold importance in the scholarly growth of medical students."

Unfortunately, the "demanding period of training, with its inevitable economic strain, has become so long that it is beginning to discourage candidates from entering the field of medicine," according to Dr. W. Barry Wood, vice president of the Johns Hopkins Medical Institutions.

Many young men have to enter private practice immediately on graduation because they can't afford hospital residency experience.

Industrial Accidents

Los Angeles. — Remarkable progress in reducing health hazards and a 30 per cent drop in accidental deaths from 1940 to 1955 were hailed as major contributions of industrial medicine, during the 17th annual Congress on Industrial Health here recently. (Feb. 4-6).

This progress was cited in a keynote speech by Dr. Dwight H. Murray, Napa, Calif., president of the American Medical Association. The Congress, attended by some 750 persons, was sponsored by the A. M. A.'s Council on Industrial Health and six other cooperating groups.

North Little Rock residents voted almost 9 to 1 on February 19, for a \$750,000 bond issue to help build the city's first hospital. It is thought, however, that a 2½ to 3 year waiting period will be necessary before federal Hill-Burton funds are allocated for the North Little Rock hospital since North Little Rock has a Class D priority for the funds, the lowest category.

Dr. Malcom Phelps of El Reno, Okla., president-elect of the American Academy of General Practice was the chief speaker at Medical Science Day activities at the University of Arkansas, Fayetteville, March 9. The one-day event was sponsored by Alpha Epsilon Delta, an honor pre-med fraternity, Pi Mu Delta, medical science fraternity, student nurses and pre-pharmacy, pre-dental and pre-medical technology students at the University.

Excerpt from Federal Medical Services Newsletter Concerning V. A. Medical Care

The medical profession, therefore, feels that the V. A. should properly provide care only for veterans whose illnesses were incurred in or aggravated by their military service, and that legislation should be enacted to enforce this restriction. However, while present laws continue and the V. A. is authorized to provide care for both service-connected and non-service-connected disabilities, priorities for admission should be given, **first**, to service-connected disabilities and, **second**, to those veterans with non-service-connected disabilities who **truly** cannot pay for hospital care.

This change in emphasis does not, necessarily, mean that all chronically diseased veterans should be admitted to V. A. hospitals. Veterans Administration care should be restricted to service-connected cases, but, even under present laws, non-service-connected care should be primarily for those "whose illness constitutes economic disaster." This does not mean a blanket priority for all veterans with chronic disabilities, since the exception is based, not on the **length** of the illness, but on its **economic effect** on the patient.

Thus, if local facilities can adequately handle an illness, without undue cost to the patient, there is no **necessity** for admission to a V. A. hospital.

Report of Conference on Blue Shield Professional Relations

The largest attendance ever registered at an annual Blue Shield Professional Relations Conference marked the 1957 Conference held at the Drake Hotel, Chicago, February 11-13. Over 300 delegates were registered, approximately one-half being physician trustees of Blue Shield Plans and officers or officers-elect of the various State Medical Societies. Attending from Arkansas were Dr. Sanford C. Monroe, Pine Bluff, a Blue Shield Trustee, and Dr. T. Duel Brown, Little Rock, President-elect of the Arkansas Medical Society. The Arkansas Plan was also represented by members of the Plan staff.

The program was built around an evaluation of relationships between individual Blue Shield Plans and their respective sponsoring medical societies and recognized the greatly improved atmosphere of cooperation between the national Blue Shield Commission and the American Medical Association.

The importance of opportunities for the profession to have a direct voice in determining Plan policy matters and patterns for establishing most harmonious cooperation between Blue Shield Plans and their sponsoring professional bodies were thoroughly explored.

Other subjects of primary concern included the need for a better understanding of Blue Shield philosophy, the need for formal courses in medical economics in medical schools, assurance that fee schedules are formulated by physicians themselves and that benefits be expanded to include all branches of medical practice, and the desirability of a body which could maintain close liaison between the sponsoring Society and the Blue Shield Boards of Trustees.

HEALTH STATISTICS

Cost of Medical Care in the U. S.

When the various parts that go into the Nation's health bill each year are

added up, the total is staggering. Estimates of private and public spending include the cost of everything from patent medicine and toothpaste to surgeons' fees. Private care for the country in 1955 was placed at \$11.2 billion, while public care (federal, state and local) was estimated at \$3.9 billion. The following figures for private care costs are for 1955:

\$3.4 billion for physicians' charges.

\$3.7 billion for hospital charges.

\$2.3 billion for charges for drugs and appliances.

\$1.8 billion for other charges, including nursing, etc.

Health and Medical Resources

The medical "plant" that provides the country with the finest care of any nation is equally impressive when viewed statistically. In one area, that of medical school graduates, bare statistics fail to tell the whole story. They do not, for instance, reflect the increased utilization of physicians' skills and the advance of medical knowledge in treatment of patients:

225,579 physicians in U. S. in January, 1956.

1,604,000 hospital beds in U. S. in 1955.

430,000 professional nurses in 1955.

300,000 practical nurses, attendants, nurses' aids in 1955.

4,735 medical school graduates in 1930.

5,275 medical school graduates in 1940.

6,135 medical school graduates in 1950.

6,845 medical school graduates in 1956.

Voluntary Health Insurance

Another development of great importance in the furnishing of medical care has been the growth of voluntary health insurance. Twenty years ago the number of persons covered by some form of health insurance was only 1.5 million. When the drive was on for compulsory health insurance in 1949, just over 50 million persons were covered by voluntary insurance. Organized medicine contended then that voluntary coverage would expand, thus obviating the need for government insurance. The figures below prove this was a good estimate of the situation:

110,000,000 persons now covered for hospital charges.

92,000,000 persons now covered for physicians' charges for surgery.

55,000,000 persons now covered for physicians' medical charges in hospitals.

10,000,000 persons now covered for physicians' home and office call charges.

10,000,000 persons now covered for major medical expenses (catastrophic) compared with 1,200,000 covered in 1953.

Veterans

Another vast program with high demands on the federal budget is that for veterans medical care. The policy of the Federal Government is that wartime veterans with service-incurred disabilities are entitled to the best medical and hospital care that can be provided. The American Medical Association supports this policy. Congress in June, 1924, authorized VA to admit indigent non-service-connected veterans when there were spare beds. By 1957 roughly 75% of all cases treated in VA hospitals were for injuries and diseases not originating during or aggravated by military service.

Now the problem is becoming more complicated as the veteran population grows older (World War I veteran in VA hospitals averages age 62) and becomes subject to chronic illnesses. Demands increase for use of VA facilities. Today VA requires: a full-time staff of over 4,600 physicians; 2,247 residents; 11,000 part-time consultants; and thousands of doctors on a contract basis for the agency's home-town care program.

22,599,000 total number of living veterans as of January, 1957.

121,865 total number of VA hospital beds as of January, 1957.

111,540 number of patients in VA hospital facilities on an average 1957 day.

\$619,614,000 will be spent by VA for in-patient care in fiscal year 1957.

\$82,638,000 will be spent for out-patient care in fiscal year 1957.

More than 2 out of 3 veterans treated in VA hospitals are treated for non-service-connected conditions.

Congress Hears AMA Witnesses On Veterans Care

AMA Testifies on Veterans Hospitalization. American Medical Association has indorsed Rep. Olin Teague's bill to

write into law new administrative practices that tighten up on admission to VA hospitals of veterans with non-service-connected disabilities (see Letter 85-3). "It is certainly a step in the right direction," Dr. Edwin S. Hamilton, AMA Board of Trustees member, testified March 5. And Dr. Russell B. Roth of Erie, Pa., member of the AMA Committee on Federal Medical Services added:

"It seems desirable for the government to inject into its dealing with applicants for tax-paid medical care the same measure of regard for sound business practice which it attempts to assert in other economic dealing with its citizens."

Witnesses stressed Congress should decide on a sound policy for medical care of non - service - connected cases "before the problem grows too big."

Amvets and VFW Testify on Veterans Hospitalization

Continuing its hearings on the VA hospital program, the House Veterans Affairs Committee heard from two more veterans organizations. The AMVETS testified that it recognizes "an inherent responsibility . . . to make certain that only those (non-service-connected) cases that cannot afford to pay" will receive free VA hospitalization and care. While the group doesn't feel abuses of this privilege are widespread, "even if it were a single case, steps should be taken to prevent its recurrence." AMVETS pointed out that tightened admission procedures advocated in H. R. 58, Rep. Teague's bill, already have been effected administratively.

From the Veterans of Foreign Wars witness came this observation: "We have not insisted . . . that the facilities of VA be extended to non-service-connected well-to-do veterans who are able to pay for short term periods of hospitalization and medical treatment. We do believe, however, that a liberal interpretation shall apply to the question of ability to pay and that a narrow and unrealistic criterion be avoided."

The American Legion's National Rehabilitation Commission recommended outright opposition to the Teague bill during a Washington meeting, but left up to the Legion's national board meet-

ing in May final policy action. (See page 2 for AMA's testimony before committee.)

National Organization Set Up to Promote Jenkins-Keogh Plan

Seven associations, including the American Medical Association, have banded together into a national organization to promote legislation for establishment of voluntary pension plans for the self-employed, the Jenkins-Keogh proposal long supported by the AMA. Name of the new organization is "American Thrift Assembly for Ten Million Self-Employed." Its headquarters are in Washington, at 1025 Connecticut Avenue. F. Joseph Donohue, Washington attorney, is national chairman.

In addition to the AMA, charter members of the new group are American Bar Association, American Institute of Accountants, American Retail Federation, National Association of Real Estate Boards, American Dental Association, and National Association of Retail Druggists. Its steering committee will present to the public and Congress the viewpoints of some 20 national associations representing business, agriculture and the professions.

The objective is passage of legislation to authorize deferment of income tax on a portion of income if put into a retirement or annuity program, with tax to be paid as the money is received back in the form of retirement benefits. Under present law, corporations need not pay taxes on money put into retirement plans for their employees, but the self-employed are denied this advantage.

Doctor Outlines Some Abuses Of Insurance by Public

Louisville. — A dangerous trend in health insurance today—and one reason for its rising cost—is the public demand for too many benefits which do not belong in an insurance policy.

Dr. Carll S. Mundy, Toledo, Ohio, vice chairman of the American Medical Association's Council on Rural Health, discussed the problem Friday at the 12th National Conference on Rural Health.

"For example, each and every one of us know that our automobiles will wear out in X number of years," he said. "We

make no attempt to carry insurance against that expected wear and obsolescence. Instead, we try to save enough money to buy a new car when we think we need one.

"Home and office calls, the annual health examination, annual x-rays . . . routine vaccination, are all events we know will happen to us and our children. Therefore . . . they should be provided for in our budget just as we provide for a new car. To attempt to cover them by insurance not only increases premium costs out of proportion to benefits obtained, but abuses the original purposes of insurance."

Doctors and National Defense

The Board of Trustees recently authorized the A. M. A. Council on National Defense to go ahead with a research project, proposed by the Federal Civil Defense Administration, to study the best method of providing medical care to the surviving population—casualty and non-casualty—in the event of an enemy attack.

Planning for such an exhaustive study is now underway, and Council Secretary Frank W. Barton estimates the project will require 12 to 15 months to complete. The cost, estimated at \$150,000, will be financed by the Federal Civil Defense Administration.

The rural population, civic leadership and professional health agencies were represented March 20-21 at the sixth Arkansas Rural Health Conference at Little Rock. Sessions were conducted in the Arkansas Medical Center. Purpose of this year's event was to discover and discuss problems of rural health in the state. Dr. Ben N. Saltzman of Mountain Home, is chairman of the Arkansas Medical Society's Committee on Rural Health which co-sponsors the annual conference with the Woman's Auxiliary to the Society, Arkansas Dental Association, Arkansas State Board of Health, Agricultural Extension Service, Arkansas Council of Home Demonstration Clubs and Arkansas Farm Bureau Federation.

The National Fund for Medical Education has announced grants totaling

\$36,840 to the University of Arkansas Medical School at Little Rock. Arkansas' share was part of \$3,067,100 distributed to the nation's 82 accredited medical schools. Arkansas and 75 other 4-year schools got a lump sum of \$15,000 plus another grant of \$65 per undergraduate student. Two year schools got a smaller amount. This year's grant was the largest since the fund was organized in 1949. Since 1951, when the grants started, the fund has distributed \$12,665,591.

Dentist Refutes Reasons For Not Seeking Dental Care

Louisville.—If all the people who needed dental care went to the dentist to get it, and all 97,500 dentists in the country worked 24 hours to give it, it would take years just to catch up, the president-elect of the American Dental Association said today.

Dr. W. R. Alstadt, Little Rock, Ark., said there are enough dentists and dental facilities to go around although more will be needed in the future. The trouble is that people just don't go to the dentist. While dental fees have gone up about 75 per cent since 1939, the general cost of living has gone up more than 90 per cent. The truth is that people buy what they want and not what they need. It is not uncommon to find poor dental health "among people who spend their money freely on the latest in fads and amusements."

From National Medical Veterans Society, Feb., 1957:

Oklahoma County Medical Society Gets Up its Dander; Sends resolution to the V. A., Senators, Congressmen, Chamber of Commerce, editors of newspapers, and others!

Griped by the flagrant practice of the Will Rogers Veterans Hospital of caring for patients covered by workmen's compensation, liability, and by private insurance, and, of course, collecting the insurance for doctor and hospital services rendered, the members of the Oklahoma County Medical Society adopted a resolution condemning this practice. They declared it not only a plain violation of the ethical practice of medicine, but a definite violation of the Veterans Act. They

further declared such practice would ultimately weaken the effectiveness of medical care of the veteran with Service-connected disabilities, as well as the truly indigent veteran, and furthermore, that such practice results in direct competition with private hospitals and medical personnel—a practice condemned by the State Medical Associations and the American Medical Association. They let it be known that if their member physicians continued in such practice, it would be considered unethical; and then THEREFORE RESOLVED to give Will Rogers Veterans Hospital ninety days to correct these violations and, if it failed to do so, to take appropriate action toward suspension of the guilty members from the rolls of the Society.

Planning Called Necessary in Suburban Expansion

Louisville.—An expert in land use today decried the loss of millions of acres of “our flattest and most fertile farmlands” to non-farm uses, while low-grade farm land which could have been used has been bypassed.

“We are subdividing and rurbanizing ourselves right out of good food-producing lands,” Louis A. Wolfanger, Ph. D., professor of land use at Michigan State University, East Lansing, told physicians and farm leaders attending the 12th National Conference on Rural Health. It is sponsored by the American Medical Association’s Council on Rural Health.

The loss of valuable farmlands and the “Topsy-like” growth of communities could be prevented, he said, through adequate planning by the rural governments into which expansion is taking place.

Medical Civil Defense Emblem

This emblem has been agreed upon by a committee composed of representatives of The World Medical Association, the International Committee of the Red Cross, and the International Committee of Military Medicine and Pharmacy and ratified by The World Medical Association as the one to be adopted nationally and internationally to protect doctors, ancillary medical personnel, medical units

and equipment engaged in civil defense just as the Red Cross protects such personnel and units in the armed forces.

Central Repository for Medical Credentials

A Central Repository for the medical credentials of doctors of the world has been developed through the joint efforts of the national member associations and the General Secretariat of The World Medical Association. Credentials or authenticated duplicates or copies will be processed jointly by the member associations and the Secretariat of The World Medical Association. Application blanks and identification forms to accompany the credentials for deposit will be available through the national medical association of each country and its component parts.

Liver Ailment Grows as Public Health Problem

Chicago —Infectious hepatitis, a liver ailment, is creating more interest among public health workers than probably any American Medical Association publication said today.

The number of reported cases has “jumped dramatically” since hepatitis was added to the list of nationally reported diseases in 1952, and it is now the third most common infectious disease in the U. S., according to an article in the current (February) *Today’s Health*.

Rep. Williams Heads Health Subcommittee

Rep. John Bell Williams (D., Miss.), a member of the House Interstate and Foreign Commerce Committee for 10 years, has been named chairman of its Health Subcommittee. Other members are Democrats Dies of Texas, Rhodes of Pennsylvania, O’Brien of New York, Dingell of Michigan, Loser of Tennessee, and Republicans Heselton of Massachusetts, Bush of Pennsylvania, Schenck of Ohio, Carrigg of Pennsylvania and Neal of West Virginia. The latter is a physician, Dr. Will E. Neal, elected last fall after having served one previous term.

Army's First Interns For Class One Hospitals

Fourteen June graduates of medical schools approved by the American Medical Association will report for duty at the U. S. Army Hospital, Fort Benning, Ga., July 1, 1957 to inaugurate the first internships yet instituted for the Army's Class I hospitals.

This will be a "pilot" program directed towards the introduction of such training in other hospitals of this classification.

AMA Sponsors First International Film Program

A unique selection of foreign-made medical films will be shown for the first time at the American Medical Association's 106th Annual Meeting June 3-7 in New York City. So far, 20 countries have submitted applications to this "international medical film program."

A. M. A. Foods Council Calls Low-Sodium Milk Useful

Chicago.—The Council on Foods and Nutrition of the American Medical Association said today that low-sodium milk should be "extremely useful" to persons who must restrict their sodium intake.

According to a statement in the current (March 2) Journal of the A. M. A., low-sodium milk is liquid whole milk which has been processed to remove more than 90 per cent of the normal amount of sodium.

Sodium-restricted diets are used to counteract fluid retention by the body in such conditions as congestive heart failure, cirrhosis of the liver, certain kidney diseases, toxemias of pregnancy, and high blood pressure. Some common sources of sodium are table salt, baking powder, and baking soda.

AMA Plans Outstanding Medical Meeting in June

Physicians attending the AMA's 106th Annual Meeting in New York City June 3-7 will find a star-studded revue of exhibits, scientific lectures, medical films and color television programs lined up for their pleasure and enlightenment.

Approximately 18,000 physicians from all over the country are expected to participate in this world-famous "short course" in postgraduate medical education. Focal point of the scientific program will be the Coliseum—New York's new exhibition hall—with four floors devoted to technical and scientific exhibits, many of the scientific meetings and the color television program. A number of section meetings plus the scientific film program will be held in hotels near the exhibit hall. Headquarters for the House of Delegates will be the Waldorf Astoria.

VA Hospitalization Studied By House Committee

A perennial problem for Congress, the extent of hospitalization for veterans, is up for study again before the House Veterans Affairs Committee. Chairman Teague (D., Tex.) has started sessions which will investigate the subject further when subcommittees are named. A hospital subcommittee in all likelihood will be headed by Rep. George Long (D., La.).

Recognizing that the World War I veteran is an increasing problem for VA, Administrator Harvey Higley testified that the issue was narrowing down to whether the government should increase VA bed capacity only for service-connected cases. A statement of policy from Congress on the issue of non-service-connected care would be helpful to VA, he said. The government cannot, he added, close its eyes to the problem of the non-service chronic case.

Announcements

The Ninth Postgraduate Assembly In Endocrinology and Metabolism

Sponsored by the Endocrine Society, the Medical College of Georgia, and the Medical College of Georgia Foundation, Inc., Augusta, Georgia, October 21-25, 1957.

The faculty will consist of twenty-two eminent clinicians and investigators from various parts of the country in the fields of endocrinology and metabolism.

For further information concerning the program and registration, write to

Dr. Robert B. Greenblatt, Department of Endocrinology, Medical College of Georgia, Augusta, Georgia. Registration is limited to 100; tuition fee is \$100.00. Rooms will be reserved for the students and faculty at the Bon Air Hotel. Residents and fellows will be admitted for \$35.00.

American Board of Obstetrics And Gynecology

Applications for certification (American Board of Obstetrics and Gynecology), new and reopened, for the 1958 Part I Examinations are now being accepted. All candidates are urged to make such application at the earliest possible date. Deadline date for receipt of applications is September 1, 1957. No applications can be accepted after that date. Office of the Secretary, Robert L. Faulkner, M. D., 2105 Adelbert Road, Cleveland 6, Ohio.

Arkansas State Medical Assistants Society Convention for 1957

The meeting is to be held at the Arlington Hotel in Hot Springs on May 4 and 5. Registration will begin at 2:30 P. M., May 4. Hotel reservations should be made direct with the Arlington Hotel.

Symposium on Tuberculosis and Other Chronic Pulmonary Diseases

The Sixth Annual Symposium for General Practitioners on Tuberculosis and other Chronic Pulmonary Diseases will be held in Saranac Lake, New York from July 8th to 12th, 1957. It is approved for 26 hours of formal credit to members of American Academy of General Practice.

This five day course is designed particularly for General Practitioners and presented over a period short enough so they may readily attend. Many of the sessions are informal panel discussions with ample opportunity for questions from the audience.

Obituary

One of Eastern Arkansas' oldest physicians, Dr. H. L. McClendon, aged 82, died Sunday, February 17, 1957, in Forrest City. He had been in ill health for two years. Dr. McClendon was born on Jan-

uary 17, 1875, in Lee County, Arkansas. He was the son of Mattie Pope and Elec McClendon. Moving with his family to Birmingham, Ala., he lived there as a small boy until 1924 when he returned to Palestine. Dr. McClendon was graduated from the University of the South, Sewanee, in 1920. He took graduate courses in New Orleans and in New York City. During World War I, he served in the Medical Corps. He was a lifelong member of the Methodist Church, a Mason, and a shiner and had served as president of the St. Francis County Medical Society. He is survived by his wife; one son, Henry McClendon of Mobile, Ala.; two daughters, Mrs. R. T. Deason, also of Mobile, and Mrs. Robert Ritchie of Birmingham, Ala.; five grandchildren, and three stepchildren.

Dr. William F. Robins, of Ozan, died Saturday, February 23, in a Texarkana hospital at the age of 86. Dr. Robins was a member of a pioneer southwest Arkansas family and a lifelong resident of Ozan. He began practicing medicine at Ozan in 1895 after graduating from the University of Tennessee Medical School. The survivors include his wife, Mrs. Mary Ann Robins; two brothers, Shirley Robins of Ozan and Elbert Robins of Nashville; a sister, Mrs. Jessie Hipp of Nashville, and a grandson.

Dr. M. Fink, 91, of Helena, died Friday, March 1 in a Memphis nursing home where he had been for the past 18 months since he fell and broke his hip. Dr. Fink was Phillips County's oldest physician, both in years and point of service. He started practicing medicine in Helena in 1890 and was active until his retirement two years ago.

PERSONALS AND NEWS ITEMS

The following people from Arkansas attended the National Rural Health Conference held at Louisville, Kentucky, in March: Dr. W. A. Snodgrass, Dr. Ben N. Saltzman, Dr. Charles R. Henry, Mr. Austin Vines, Mr. Waldo Frasier, Mrs. Mason Lawson, Mr. Bud Bedell, Mr. Charles Johnson, Miss Helen Robinson, Mrs. William Wilkie, Mr. Aubrey Gates, Dr. Bry-

ant Pake, Dr. W. R. Alstadt, and Mr. Joe Hunnicutt.

Dr. Lewis Hyatt was recently elected a director of Duracraft, Inc., makers of aluminum boats at Monticello.

Dr. J. W. Downs and Dr. G. Grimsley Graham have announced their association in the practice of general and thoracic surgery at 4316 West Markham, Little Rock, Ark.

Dr. James M. Kolb, Clarksville, has been named to the newly appointed "Airport Commission" for the city of Clarksville. There are five members.

Dr. Sam G. Jameson announces the opening of Jameson Urology Clinic, 700 West Faulkner St., El Dorado, Arkansas.

Dr. T. D. Brown, President-elect of the Arkansas Medical Society spoke at Camden February 6, 1957 on "The Value of Hypnosis in Medicine and Dentistry." He also attended the Blue Shield Professional Relations Conference at the Drake Hotel in Chicago, February 11-13, 1957.

February 24, 1957, was the day the new clinic in Booneville was opened for public inspection. Shortly after Dr. Donald Loveless went to Booneville about two years ago, he made known his desire for such a place. The Booneville Chamber of Commerce raised \$17,000 to help finance the clinic and Dr. Loveless provided the rest.

Dr. J. F. Guenthner of Salem has received a Fellowship degree from the American College of Medical Technologists.

A Little Rock physician, Dr. John McCullough Smith, had as a guest recently Dr. Lynn Joseph of Sydney, Australia. The doctors became friends when both were caring for sick and wounded men on New Guinea in World War II.

Little Rock, February 27-29. The institute program featured 13 nationally recognized authorities in the fields of psychiatry and neurology. Dr. Harold W. Sterling, manager of the North Little Rock Hospital was the official host for the Institute.

A meeting of the Phillips County Medical Society was held at the Helena Country Club Friday, February 22, 1957. Dr. Hugh Smith of Campbell's Clinic, Memphis, Tenn., was the guest speaker. His topic was "Common Errors in Orthopedic Emergencies." Dr. W. R. Callenduccio and Dr. Sage accompanied Dr. Smith to the meeting. At the business session, Dr. Bernard Capes was elected President, Dr. John H. Barrow was elected Vice President and Dr. L. J. Bell was elected Secretary-Treasurer.

At the February meeting of the Jackson County Medical Society in Newport, Dr. Gilbert Robertson was elected president of the organization to serve the ensuing year. Other officers elected were Dr. John Wright, vice president and Dr. J. D. Ashley, secretary-treasurer.

New officers recently elected by the Faulkner County Medical Society are Dr. C. H. Dickerson, president, Dr. N. E. Fraser, vice president and Dr. Charles A. Archer, Jr., secretary-treasurer.

White County Medical Society was host to a district medical meeting at the Rendezvous in Searcy, Tuesday, February 26. Dr. Porter Rodgers, president, presided at the meeting. A program on chest surgery and psychiatry was presented by Dr. Joe Buchman and Dr. A. C. Kolb of Little Rock.

The Independence County Bar Association was host Friday, February 8, at a dinner meeting with members of the Independence County Medical Society as special guest. A film, "The Medical Witness," was presented; the film was made under the joint sponsorship of the American Bar Association and the American Medical Society. After the film an informal discussion of medical-legal problems in presenting testimony was held.

PROCEEDINGS OF SOCIETIES

Over 1,200 persons were registered for the annual Institute in Psychiatry and Neurology held at the Ft. Roots Veterans Administration Hospital in North

Dr. James D. Grable of Des Arc was elected president of the Monroe County Medical Society at a meeting in February. Dr. W. L. Walker was named Chief of Staff of Mercy Hospital. Dr. E. D. McKnight was elected Vice Chief of staff and Dr. M. L. Dalton was named Secretary of the staff.

The Ouachita County Medical Society met in dinner session Thursday night, March 7, at the Camden Hotel in Camden as the guests of Dr. P. J. Dalton of Camden.

The program consisted of a scientific demonstration of the cardiac pacemaker and defibrillator.

Charles E. Eichenbaum, a Little Rock attorney, discussed "Tax Problems of the Physician" at the March meeting of the Pulaski County Medical Society.

Contributors to the American Medical Education Foundation, February 1957

Edwin F. Gray, Little Rock	\$100.00
J. H. McCurry, Cash	25.00
	<hr/>
	\$125.00

Several county medical societies are working in an effort to obliterate polio. The Clark County Medical Society held clinics over the county to inoculate every person regardless of age, as did the Hot Spring, Garland, White, Conway, and Pulaski County Medical Societies, to mention a few. The needles and syringes were supplied by the County Health Departments and private physicians. The program was planned to include every resident of each county with particular emphasis on those 45 and under. All persons under 20 and expectant mothers were eligible for free Salk vaccine supplied by the federal government through the state Health Department.

Woman's Auxiliary

"Don't Go Near the Water" by William Brinkley was reviewed by Mrs. Louis K. Hundley at the February meeting of Jefferson County Medical Auxiliary. The luncheon meeting was held at the home of Mrs. H. L. Wineland with Mrs. Arthur Fowler Jr. and Mrs. J. Richard

Pierce Jr. as co-hostesses. Chairman of Doctor's Day arrangements for Jefferson County Auxiliary is Mrs. Earl Glasscock.

Special guests throughout the state were honored at the February meeting of Garland County Medical Auxiliary. The meeting was held at the Hot Springs Country Club with Mrs. Robert F. McCracy, Mrs. Robert H. Atkinson, Mrs. Louis R. McFarland, and Mrs. Charles Yohe as hostesses.

Honored at the luncheon were Mrs. L. Gardner, Russellville, president of state auxiliary; Mrs. Mason Lawson, Little Rock, immediate past president of national medical auxiliary, and also Arkansas' Woman of the Year; Mrs. Louis K. Hundley of Pine Bluff, immediate past president of Southern Medical Auxiliary; Mrs. Jack Kennedy, Arkadelphia, Arkansas auxiliary president-elect; and Mrs. Hoyt Choate of Little Rock, a past president of the state auxiliary. Mrs. Gardner was the luncheon speaker, and her subject was "Auxiliary Dimensions." She pointed out by outstanding incidents the length, height, breadth and depth of the auxiliary through its programs to put into practice its slogan: Self education, public health education and service to humanity. Mrs. Lon Reed, auxiliary president, introduced other guests, who were: Mrs. Guinn Daniel, Mrs. Walter Kleinman, Mrs. William Yauch, Mrs. William A. Woodcock Sr., Mrs. Edwin Harper, Mrs. Thomas Dodson, Mrs. F. L. Beasley Jr., Mrs. M. H. Wilmont of Glenwood, and Mrs. Sam Schudma, Jr. of Lincoln, Neb.

"How We Can Help Our Doctors" was the subject of a talk given by Miss Garner, record librarian at Boone County Hospital, to members of Boone County Medical Auxiliary in February. Her talk covered the many ways in which the office assistant can be helpful, including supervisions of the reception room, answering the telephone, scheduling appointments, handling doctors' correspondence, keeping good medical histories correctly filed and readily available, and maintaining good financial records. Special guests of members were their husbands' office assistants.

Mrs. Louis K. Hundley of Pine Bluff was program speaker at the March meeting of Sebastian County Medical Auxiliary. The meeting was a coffee at the home of Mrs. John D. Olson. Mrs. Jeff Southard reported on plans for Doctor's Day, which will be marked by a dinner honoring Sebastian County doctors and doctors from Fort Chaffee at Hardscrabble Country Club. While in Fort Smith Mrs. Hundley was the guest of Dr. and Mrs. W. R. Brooksher and Dr. and Mrs. Bob Dale.

Convention chairman for the state auxiliary meeting April 23 through April 25 was Mrs. Gordon P. Oates of Little Rock. As we go to press, it's too early to know the names of committee chairmen who are in charge of arrangements for the meeting.

Mrs. C. C. Long, Ozark, has been named as "Ozark's Citizen of the Year" for 1956 by the Ozark Chamber of Commerce. She is the third person to receive this title.

TUBERCULOSIS ABSTRACTS*

Sponsored by
The Arkansas Tuberculosis Association

By Abraham Falk, M.D., and William W. Stead, M.D., The American Review of Tuberculosis and Pulmonary Diseases, December, 1956.

In 1951 it was recommended, on the basis of the Veterans Administration-Armed Forces Study of the therapy of tuberculosis, that all cases of primary tuberculous pleurisy with effusion (idiopathic pleurisy with effusion) be treated with antimicrobial therapy, as well as by sanatorium care. Recognizing that pleurisy with effusion represents tuberculosis with a high rate of subsequent relapse, it was believed that every effort should be made to reduce it. The present paper is a report of the results of the cooperative study to January 1, 1956.

In addition to the treated series, it was also possible to obtain information on a series of cases in which antimicrobial therapy had not been used. The series for comparison comprise 382 patients who received various periods of chemotherapy and 209

patients who received no chemotherapy. All patients in both series were hospitalized. However, the treated and untreated series were not concurrent in time, nor was there randomization in selection for chemotherapy against untreated controls.

The criteria established for selection of cases were:

The effusion should be of recent origin, preferably not extending over sixty days. The tuberculin skin reaction should be definitely positive before or during treatment. Tubercle bacilli should, when possible, be demonstrated in the aspirated fluid by culture or guinea pig inoculation, either at the beginning of therapy or subsequent to it.

Prior to treatment, every effort should be made to exclude a nontuberculous etiology of the effusion.

Patients having a demonstrable parenchymal lesion at the onset of the effusion were excluded from the study.

The background factors in both series

● **A comparison is made of the tuberculous complications and recurrence of pleural effusion following primary tuberculous pleurisy with effusion in patients treated with antimicrobial agents and in those untreated. Chemotherapy has reduced the incidence of tuberculous complications from 19 per cent in the untreated group to four per cent in the treated group.**

The necessity for a firm clinical diagnosis, is substantiated by the high rate of subsequent tuberculous relapse in those patients without proved tuberculous bacteriologic etiology.

were remarkably similar. Approximately half of the patients in each series were less than thirty years of age, 95 per cent in each series were males, and approximately two-thirds of each group were white. The two sides of the chest were equally affected in each group. None of the patients in either group had roentgenographic evidence of intrapulmonary lesions at the beginning of hospital treatment.

Antimicrobial therapy was not uniform as to the agents used or the duration of therapy. There were 16 patients who received chemotherapy for less than four months, chiefly streptomycin alone. However, more than half the patients received chemotherapy for six months or more with

FEATURES

various combinations of antimicrobial agents.

The total rate of tuberculous complications, excluding recurrent effusion, was 19 per cent in the untreated group and four per cent in the group which received chemotherapy. Pulmonary tuberculosis was the most frequent complication in each group and skeletal tuberculosis was the most frequent extrapulmonary complication.

Two deaths were attributable to a tuberculous relapse, both occurring in the group which did not receive chemotherapy. One death occurred in a patient who developed miliary and meningeal tuberculosis twenty-seven months after the onset of the effusion, and the other followed the diagnosis of far advanced pulmonary tuberculosis in a patient twenty-six months after onset of the effusion.

Recurrent pleural effusion was reported in five of the treated group and in 11 of the untreated series. Of the 16 recurrences there were seven on the same side as the initial effusion, eight on the contralateral side, and one bilateral recurrent.

The incidence of complications related to various background factors suggests an apparently lower incidence of extrapulmonary complications in the untreated group, a higher rate of complications among the non-whites who received chemotherapy, and a lower incidence of recurrent effusions in the treated group. None of these comparisons is statistically significant.

The incidence of complications related to the antimicrobial agents used was highest among those treated with streptomycin alone. Most of these patients received chemotherapy for less than four months. The lowest incidence is among those who were treated with drug combinations employing isoniazid, and there were also no reported extrapulmonary complications in this group.

The average length of hospitalization for

EFFECT OF CHEMOTHERAPY REGIMENS UPON THE INCIDENCE OF TUBERCULOUS COMPLICATIONS IN THE TREATMENT OF PLEURAL EFFUSION

Regimen	Number Treated	Number of Complications	Per Cent
Streptomycin only	12	3	25.0
Streptomycin-PAS	250	11	4.4
Isoniazid-streptomycin or isoniazid-PAS	120	3	2.5

treatment of the effusion among those who developed tuberculous complications was five months for those receiving no chemotherapy and six months for those who did. Seventy-five per cent of this group developed tuberculous complications while still in the hospital and on chemotherapy. More than half the complications occurred within the first six months of hospital treatment. The majority of relapse in both series occurred in those cases in which the pleural fluid bacteriologic findings had been negative. This is highly significant and further substantiates the necessity for a firm diagnosis on clinical grounds.

The estimated rate (life table method) for all tuberculous complications at the end of four years of observation was 9 per cent in the treated group compared with 25 per cent in the untreated group. A similar analysis for the complication of pulmonary tuberculosis alone indicated a rate of seven per cent and 21 per cent, respectively. The estimated complication rate for the treated cases did not increase after 30 months but did continue to increase for the untreated cases.

The rate of initial bilateral effusion in both the treated and untreated series was the same. However, the rate of complication was 57 per cent among the patients with bilateral effusion in the untreated series and confirms the clinical impression of the higher morbidity associated with this finding. The rate of complication in the treated group of bilateral effusion was six per cent.

Certain statistical defects exist in these data, primarily in the nonrandomization of cases, the lack of concurrence in time of the two series, the varying regimens of chemotherapy and duration of therapy, and the possibility of incomplete reporting of cases. The relapse rate of series of patients treated prior to the introduction of the antimicrobial drugs is usually estimated at 35 per cent and has varied from 20 to 65 per cent in reports for the five years following onset of the pleural effusion. These data and subsequent reports from the continuing study should offer information of value in estimating the results of chemotherapy in reducing the incidence of tuberculous relapse.

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BOOK REVIEWS

Clinical Use of Radioisotopes. William H. Beierwaltes, M. D.; Philip C. Johnson, M. D.; Arthur J. Solari, B. S., M. S. W. B. Saunders Co., Philadelphia, London. Pp. 456. January 29, 1957. \$11.50.

The use of radioisotopes has been fairly well limited in this state to radiologists and to a very minor degree it has been employed by the clinician. Because of the relatively limited group who use radioisotopes dissemination of information about this work has been limited; because of this, Beierwaltes, Johnson and Solari's book should be a very welcomed text, as well as a general reference book on radioisotopes to the general practitioner. It is sufficiently detailed to be used as a textbook for the undergraduate or postgraduate student who is learning the use of radioisotopes. The first portion of the book consists of a discourse on the theoretical concepts in the use of radioisotopes and the practical application of radioisotope work. In this section, the recommendations and requirements of the U. S. Atomic Energy Commission are reproduced in full. There is a rather lengthy complete discussion of the use of iodine 131. There are also excellent chapters on radioactive phosphorous and radioactive gold. The less frequently used radioactive substances are adequately discussed. The dangers of and the instrumentation in clinical radioisotope work are also discussed. This book is definitely recommended both as a textbook and a reference on radioisotopes.—AK

Pediatric Cardiology. Alexander S. Nadas, M. D., F. A. A.P. W. B. Saunders Company, Philadelphia, London. January 16, 1957. Pages: 587. \$12.00.

The emphasis on this textbook of pediatric cardiology is decidedly different than that in a textbook of cardiology for adults. Dr. Nadas devotes 268 pages of a 587 page book to congenital heart disease. The coverage is excellent. In order to assure clear understanding of the text, there are excellent accompanying diagrams and outlines where indicated. The illustrations are good. Also of particular interest is a section on anesthesia for children with heart disease which was prepared by Dr. Robert M. Smith of the Children's Medical Center of Boston, Mass. The first section of the book which comprises one of the four main sections discusses the tools of diagnosis, namely history, physical examination, and routine tests applicable in pediatric cardiology. This is a very valuable addition to the book. This book is well written and is recommended for anyone dealing with pediatric cardiology.—AK

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*Hunt, W. J., Warren	
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Holloway, O. R., 320 St. Charles St., Little Rock	FR 4-2424
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Harris, Charles P., Caraway	
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Ledbetter, Paul, Jonesboro	WE 2-8392
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McCurry, J. H., Cash	
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Oates, Franklin T., Lepanto	51
Peeler, Malcolm O., Jonesboro	WE 2-7456
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*Stroud, H. A., Jonesboro	
Stroud, Paul T., Jonesboro	WE 2-8323
Stuck, Paul L., Jonesboro	WE 2-7447
Swingle, Charles G., Marked Tree	70
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Franks, R. H., Memphis, Tennessee	BR 2-2601
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Hickman, R. L., Memphis, Tennessee	GL 8-9726
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McGinnis, Robert S., Hughes	ED 9-2373
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Dickerson, C. H., Sr., Conway	140
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*McCollum, Isaac N., Conway	
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Bollinger, W. H., Charleston	45J
Brothers, Duane E., Ozark	MO 7-5121
Gibbons, David L., Ozark	MO 7-5241
Gibbons, W. H., Ozark	MO 7-3201
Hensley, Wm. C., Charleston	200
Long, C. C., Ozark	MO 7-5121
Pillstrom, E. W., Ozark	MO 8-2211

GARLAND COUNTY

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Atkinson, Robert H., 236 Central, Hot Springs	NA 3-6101
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Bohnen, Loren O., Chicago, Illinois	
Burch, N. B., 1622 Central, Hot Springs	NA 4-1871
Burton, Frank M., 101 Whittington, Hot Springs	NA 3-6611
Chamberlain, Warren W., 236 Central, Hot Springs	NA 3-4477
Chenault, H. Clay, 231 Central, Hot Springs	NA 3-1603
Chesnutt, James H., 2412 Central, Hot Springs	NA 3-5672
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Coffey, George C., 236 Central, Hot Springs	NA 3-2731
Collier, T. J., Sr., 501 Malvern St., Hot Springs	NA 3-8864
Daniel, R. L., 231 Central, Hot Springs	NA 3-1603
Dembinski, T. Henry, 805½ Central, Hot Springs	NA 3-9781
Dodson, John W., Jr., 236 Central, Hot Springs	NA 3-4541
Durham, Thomas M., Jr., 236 Central, Hot Springs	NA 3-5162
Eisele, Wm. Martin, 101 Whittington, Hot Springs	NA 3-6611
Fletcher, George B., 236 Central, Hot Springs	NA 3-8221
Flotter, George J., 236 Central, Hot Springs	NA 3-5121
Garner, O. P., 1315 Central, Hot Springs	NA 4-1207
Garratt, Charles E., 236 Central, Hot Springs	NA 3-2691
Goetze, Dorothy, 236 Central, Hot Springs	NA 3-6771
Goodrum, William A., 236 Central, Hot Springs	NA 3-7031
Graham, Richard F., 236 Central, Hot Springs	NA 3-4391
Gray, W. E., 236 Central, Hot Springs	NA 3-6111
Hebert, Gaston A., 236 Central, Hot Springs	NA 3-5221
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Jackson, Haynes G., 236 Central, Hot Springs	NA 3-2961
Jackson, W. W., Thompson Bldg., Hot Springs	NA 3-4931
James, David H., Memphis, Tennessee	MU 5-5341
Jones, Edith Irby, 423½ Malvern, Hot Springs	NA 3-6561
King, Leeman H., 236 Central, Hot Springs	NA 3-1545
Klugh, Walter G., Jr., 537 Prospect, Hot Springs	NA 4-2175
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Leatherman, James W., 236 Central, Hot Springs	NA 3-8791
Lecklitner, Myron D., 236 Central, Hot Springs	NA 3-6491
Lee, D. C., 236 Central, Hot Springs	NA 3-2361
Lee, W. R., 236 Central, Hot Springs	NA 3-2361
Lewis, Robert L., 239 Ouachita, Hot Springs	NA 4-2111
McCrary, Robert F., 236 Central, Hot Springs	NA 3-3501
McFarland, Louis R., 1714 Central, Hot Springs	NA 3-5752
McMahon, James C., 1315 Central, Hot Springs	NA 3-1137
Martin, L. G., 236 Central, Hot Springs	NA 3-6491
Parkerson, C. W., 1315 Central, Hot Springs	NA 4-1207
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Phipps, Harold H., 423 Malvern, Hot Springs	NA 3-2321
Porter, William F., 236 Central, Hot Springs	NA 3-6161
Power, Allyn R., 236 Central, Hot Springs	NA 3-3102
Purdum, E. A., 236 Central, Hot Springs	NA 3-6161
Reed, Lon E., 1315 Central, Hot Springs	NA 4-1207
Rosenzweig, Joseph L., 126 Hawthorne, Hot Springs	NA 3-1012
Rowland, E. Driver, 236 Central, Hot Springs	NA 3-2181
Rowland, John F., Majestic Hotel, Hot Springs	
Sammons, Vernon E., 236 Central, Hot Springs	NA 3-9581
Scott, Jett O., 236 Central, Hot Springs	NA 3-5121
Scully, Francis J., 236 Central, Hot Springs	NA 3-3157
Smith, Euclid M., 236 Central, Hot Springs	NA 3-3384
Smith, Oliver A., 528 Central, Hot Springs	NA 3-1121
Smith, William K., 236 Central, Hot Springs	NA 3-2171
Stough, D. B., 236 Central, Hot Springs	NA 3-6921
Strachan, James B., Box 574, Hot Springs	
Tarleton, Francis S., 236 Central, Hot Springs	NA 3-1481
Tribble, A. H., 236 Central, Hot Springs	NA 3-3431
Wade, H. King, Jr., 231 Central, Hot Springs	NA 3-1603
Wade, H. King, Sr., 231 Central, Hot Springs	NA 3-1603
Wilkins, J. S., 1515 Central, Hot Springs	NA 3-3746
Woodcock, William A., 236 Central, Hot Springs	NA 3-9581
Woods, Paul H., 1201 Marshall, Little Rock	
Wright, Homer K., 4000 Central, Hot Springs	NA 3-6677
Wright, Jack, 4000 Central, Hot Springs	NA 3-6677
Yohe, Charles D., 236 Central, Hot Springs	NA 3-2517

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Kelly, Robert M., Sheridan	WH 2-1501

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Clopton, O. H., Rector	2671
Duckworth, Hillard R., Piggott	237
Futrell, J. Byron, Rector	2611
Haley, R. J., Jr., Paragould	CE 6-3310
Harper, Bland R., Monette	114
Jones, F. H., Piggott	336
McGuire, J. E., Piggott	300
McKelvey, E. D., Paragould	CE 6-4341
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Purcell, Donald I., Paragould	CE 2-7623
Ratton, Robert W., Paragould	CE 2-7678

Turner, W. E., Jr., Piggott	120
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HEMPSTEAD COUNTY

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Crow, Neil E., Hope	
Harris, C. Lynn, Hope	PR 7-2131
Lafferty, Wayne, Hope	PR 7-2884
*Lile, L. M., Hope	
McKenzie, Jim, Hope	PR 7-2321
Martindale, James G., Hope	PR 7-3464
Martindale, Jud B., Hope	PR 7-3464
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INDEPENDENCE COUNTY

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Brown, H. H., State Hospital, Benton	SP 8-2573
Calaway, R. L., Batesville	733
Calaway, W. H., Batesville	733
Churchill, C. A., Batesville	44
Craig, M. S., Batesville	60
Evans, L. T., Batesville	33
Grasse, A. Meryl, Calico Rock	20
Gray, Paul, Batesville	112
Hinkle, Charles G., Batesville	249
Jeffery, Paul H., Bethesda	956-W-1
Johnston, O. J. T., Batesville	262
Jones, W. A., El Paso, Texas	2-7579
Ketz, W. J., Batesville	262
McAdams, V. D., Cord	PI 6-3517
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Taylor, Chaney W., Batesville	733
Taylor, Charles A., Batesville	733
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Weathers, James L., Salem	25
Woods, O. S., Salem	36
Wright, Paul O., Melbourne	50
Wyatt, Finnis Q., Batesville	733

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Robertson, Gerald G., Newport	443
Stanfield, Wayne, Newport	443
Walker, H. O., Newport	33
Williams, Thomas E., Newport	443
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JEFFERSON COUNTY

Anderson, Charles W., 1108½ Poplar, Pine Bluff	JE 4-8651
Bruce, W. H., 405 W. 2, Pine Bluff	JE 5-2142
Burford, Thomas G., Saudi, Arabia	
Capel, H. T., 409 W. 2, Pine Bluff	JE 4-7303
Causey, Hunter A., 1310 Cherry, Pine Bluff	JE 4-6210
Clark, O. W., Route 7, Pine Bluff	JE 4-0761
Cunningham, T. J., Jr., 300 W. 6, Pine Bluff	JE 4-4723
Cunningham, T. J., Sr., Ingram Bldg., Pine Bluff	JE 4-1906
Dickins, Robert D., 1003 Cherry, Pine Bluff	JE 4-8141
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Flowers, Cleon A., Masonic Bldg., Pine Bluff	JE 4-5523
Fowler, Arthur, Jr., 118 W. 5th, Pine Bluff	JE 4-3561
Glasscock, R. E., National Bldg., Pine Bluff	JE 4-0413
Hart, J. Clyde, Jr., 1310 Cherry, Pine Bluff	JE 4-6210
Hundley, Louis K., National Bldg., Pine Bluff	JE 4-8363
Hutchison, E. L., National Bldg., Pine Bluff	JE 5-1562
Hyman, Carl E., Masonic Temple, Pine Bluff	JE 4-5523
Lawlah, Clyde A., 329½ Main, Pine Bluff	JE 4-1912
Lowe, W. T., 1108 Poplar, Pine Bluff	JE 4-3514
Luck, Benjamin D., Jr., National Bldg., Pine Bluff	JE 4-1220
McAllister, James T., Jr., 1214 Main, Pine Bluff	JE 4-0671
McCain, B. E., 1108½ Poplar, Pine Bluff	JE 4-8651
McMullen, E. C., 204 Park Place, Pine Bluff	JE 4-1100

Maynard, Ross E., National Bldg., Pine Bluff	JE 4-5732
Monroe, S. C., 1421 Cherry, Pine Bluff	JE 5-2200
Morris, Harold J., 1030 Poplar, Pine Bluff	JE 4-0822
Nixon, William Robert, Arkansas Baptist Hospital, Little Rock	
Payne, Virgil L., National Bldg., Pine Bluff	JE 4-1282
Pemberton, Philip E., Rockford, Illinois	
Pierce, J. R., Jr., 1107 Cherry, Pine Bluff	JE 5-0831
Raney, Oliver C., 1021 Cherry, Pine Bluff	JE 4-5861
Reed, E. Frank, Jr., 916 Cherry, Pine Bluff	JE 5-0121
Reed, Ulysses S., Masonic Temple, Pine Bluff	JE 4-6910
Reid, Charles W., 1113 Cherry, Pine Bluff	JE 4-0240
Rhyme, James T., 1111 Cherry, Pine Bluff	JE 4-1631
Riley, William K., 118 W. 5th, Pine Bluff	JE 4-3561
Robinette, Joseph S., 1115 Cherry, Pine Bluff	JE 5-2372
Russell, Allen R., 1021 Linden, Pine Bluff	JE 5-2252
Shelton, M. A., Wabbaseka	6-3816
Simmons, Calvin R., 1107 Cherry, Pine Bluff	JE 5-0831
Spillyards, J. S., National Building, Pine Bluff	JE 4-1244
Stern, Howard, 1315 Linden, Pine Bluff	JE 4-0342
Sullenberger, A. G., 1019 Cherry, Pine Bluff	JE 4-4407
Talbot, George B., 1421 Cherry, Pine Bluff	JE 5-2200
Townsend, Thomas E., 1310 Cherry, Pine Bluff	JE 4-6210
Walker, John K., 1107 Cherry, Pine Bluff	JE 5-0831
Wilkins, Walter J., Jr., 1421 Cherry, Pine Bluff	JE 5-2200
Wineland, H. L., 118 West 5th, Pine Bluff	JE 4-3561
Wooley, Ralph R., 1127 Cherry, Pine Bluff	JE 4-2261

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Graves, S. M., Clarksville	PL 4-2730
Hardgrave, George L., Clarksville	PL 4-2711
Kolb, James M., Clarksville	PL 4-2007
Manley, Robert H., Clarksville	PL 4-2050
Scarborough, W. R., Clarksville	PL 4-2512
Shrigley, Guy P., Clarksville	PL 4-2043
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Daniel, N. B., 317 State Line, Texarkana	32-8231

Davis, E. L., 317 State Line, Texarkana	32-8231
Ellison, Eugene T., 619 Main, Texarkana	3-5173
Goesl, Andrew G., 317 State Line, Texarkana	32-8231
Good, Louis P., 5th and Hazel, Texarkana	2-3145
Griffin, John S., 619 Main, Texarkana	3-5173
Harrell, Wm. B., Jr., 317 State Line, Texarkana	32-8231
Harrison, James W., 401 E. 5th, Texarkana	2-3145
Jones, J. W., 5th and Hazel, Texarkana	2-3145
Kemp, K. H., 408 Hazel, Texarkana	2-5181
Kirkpatrick, R. R., 6th and Walnut, Texarkana	2-5141
Kittrell, J. B., Box 1453, Texarkana	2-7922
Lanier, L. H., Box 1423, Texarkana	
Laws, J. K., St. Michael's Texarkana	2-4111
Little, A. A., 119 East 6th, Texarkana	2-5141
Meredith, Wm. R., U. S. A. F.	
Middleton, B. C., State Nat'l Bank Bldg., Texarkana	2-5321
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Rushing, Louis U., 515 Olive, Texarkana	32-6531
Smith, Wm. D., 119 East 6th, Texarkana	2-5141
Tasley, Gerald H., 401 E. 5th, Texarkana	2-3145
Thompson, Charles A., 619 Main, Texarkana	3-5173
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Wilhelm, Freida, 317 State Line, Texarkana	32-8231
Williams, J. F., 220 W. 5th, Texarkana	3-3032
Yarbrough, Charles P., 518 Hazel, Texarkana	2-5472

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Atkinson, Gean S., Blytheville	PO 2-2128
Beasley, Joe E., Blytheville	PO 3-3552
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Fairley, Julian, Luxora	
Green, W. O., Jr., Blytheville	PO 3-6802
Hubener, L. F., Gainesville, Florida	FRA 2-1878
Hubener, L. L., Blytheville	PO 2-2021
Johnson, I. R., Blytheville	PO 2-2041
Johnson, R. L., Blytheville	PO 3-4526
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Sims, Hunter, Jr., Blytheville	PO 3-8032
Sims, Hunter, Sr., Blytheville	PO 3-8032
Skaller, M. L., Blytheville	PO 2-2806
Utley, F. E., Blytheville	PO 3-6081
Walls, James M., Blytheville	PO 3-6082
Webb, James Jackson, Blytheville	PO 2-2131
Workman, W. W., Blytheville	PO 3-8118

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Turney, Lonnie R., McGehee	CA 2-4044

OUACHITA COUNTY

Byrd, E. J., 714 McCullough, Camden	TE 6-3200
Dalton, Perry J., 415 Hospital Drive, S.W., Camden	TE 6-5013
Edman, J. L., Jr., 415 Hospital Dr., S.W., Camden	TE 6-5013
Drewery, L. E., 222 Van Buren St., N.W., Camden	TE 6-5058
Ellis, William B., Stephens	2551
Gossett, C. E., 135 North Street, S.W., Camden	TEN 4-4143
Guthrie, James, 222 Van Buren, N.W., Camden	TE 6-5058
Hawley, James W., 140 Van Buren, S.W., Camden	TE 6-5710
Hearnsberger, Henry G., Stephens	4611
Jameson, John B., Jr., 110 Harrison, S.W., Camden	TE 6-5088
Lewis, R. C., 621 Adams Ave., S.E., Camden	TE 6-5753
McAlister, John P., 109 Washington, S.E., Camden	TE 6-2350
Magness, William C., Branson, Mo.	ED 4-3356
Meek, Tom J., 415 Hospital Drive, S.W.	TE 6-5013
Miller, John H., 109 Adams Ave., S.E., Camden	TE 6-2890
Ozment, L. V., 139 California Ave., S.W., Camden	TE 6-3253

Partee, Norf G., 223 Jefferson, S.W., Camden	TE 6-2339
Pruitt, Willard H., 108 Jefferson, S.E., Camden	TE 6-5744
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Capes, Bernard, W. Helena	JU 5-2621
Chrestman, R. L., Jr., Helena	HI 4-3294
Connolly, Wm. B., Helena	HI 4-3791
Ellis, Wm. A., Jr., Helena	HI 4-3037
Faulkner, Henry N., Helena	HI 4-7401
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Kirkman, C. M. T., Helena	HI 4-2712
Kultgen, Edward, Elaine	VA 7-3675
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Armstrong, Howard M., 1120 Marshall, Little Rock	FR 2-5626
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Atkinson, Shelby, 4208 Lakeview, North Little Rock	SK 3-4262
Ault, C. C., VA Hospital, North Little Rock	FR 4-4371
Autry, Daniel H., Donaghey Bldg., Little Rock	FR 6-1313
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Bauer, Frank M., 520 Pulaski St., Little Rock	FR 5-8652
Beard, Owen W., 300 E. Roosevelt Rd., Little Rock	FR 4-3331
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Black, Hal R., Jr., Donaghey Bldg., Little Rock	FR 2-7588
Black, H. Thurston, Donaghey Bldg., Little Rock	FR 5-5292
Black, Millard W., 705 North Ash, Little Rock	MO 3-5413
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Bradburn, Curry B., Donaghey Bldg., Little Rock	FR 2-6300
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Burgess, T. E., 521½ Main, Little Rock	FR 2-2733
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Busby, John V., 5008 Kavanaugh, Little Rock	MO 6-0607
Byrd, Lucas M., Jr., 3018 Wolfe, Little Rock	FR 2-6555
Calcote, Robert A., Donaghey Bldg., Little Rock	FR 4-5969
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Choate, Hoyt L., 1120 Marshall, Little Rock	FR 2-7032
Christeson, William W., Donaghey Bldg., Little Rock	FR 6-2409
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Church, B. L., 321 Maple, North Little Rock	FR 4-7796
Clark, A. C., Donaghey Bldg., Little Rock	FR 2-7631
Clark, William A., Donaghey Bldg., Little Rock	FR 5-7228
Cohen, Louis A., 814 W. 3rd, Little Rock	FR 4-3815
Compton, John Nye, Donaghey Bldg., Little Rock	FR 4-4636
Conlin, F. Dixon, 233 Englewood Dr., Little Rock	MO 6-8172
Cook, Raymond C., 601 Scott, Little Rock	FR 5-8273
Cooper, William G., Donaghey Bldg., Little Rock	FR 4-6496
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Cosgrove, K. W., Meers Bldg., Little Rock	FR 2-0951
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Crow, Jan W., 1000 W. Main, Jacksonville	LI 4-2141
Cull, S. T. W., 902 W. 2nd, Little Rock	FR 5-8073
Cullen, Phillip T., Donaghey Bldg., Little Rock	FR 4-1641
Cummins, Bryce, 31 Broadmoor Drive, Little Rock	MO 6-7773
Darnall, Roland F., 4813 Gum Spring Rd., L. R.	LO 5-3127
Davis, Malcolm W., VA Hospital, North Little Rock	FR 4-4371
Dean, Gilbert O., Donaghey Bldg., Little Rock	FR 5-7784
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Durham, James W., Jacksonville	
Easley, Edgar J., State Health Dept., Little Rock	FR 4-6361
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Egner, Kathleen E., 2801 N. Fillmore, Little Rock	FR 2-4351
Eliot, Johan W., State Health Dept., Little Rock	FR 4-6361
Eubanks, R. M., 1120 Marshall, Little Rock	FR 2-5626
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Fein, Norman N., Waldon Bldg., Little Rock	FR 4-8441
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Gates, Stanley M., State Hospital, Benton	SP 8-2573
Cay, Ellery C., Donaghey Bldg., Little Rock	FR 5-0175
Cibbins, Jack C., 2309 Durwood, Little Rock	MO 6-8712
Gillespie, A. Tharp, Donaghey Bldg., Little Rock	FR 2-2125
Gillespie, E. Clark, 306 Chester, Little Rock	FR 6-2348
Cordon, Vida H., 2616 Kavanaugh, Little Rock	MO 3-1994
Goss, Joseph J., VA Hospital, North Little Rock	FR 4-4371
Gould, David M., Medical Center, Little Rock	MO 6-9461
Graham, C. Crimsley, Donaghey Bldg., Little Rock	FR 4-6845
Graupner, Kathryn I., 1305 Welch, Little Rock	FR 4-9597
Gray, Edwin F., Donaghey Bldg., Little Rock	FR 6-1321
Cray, Fred J., Jr., Donaghey Bldg., Little Rock	FR 5-9510
Gray, Herschel F., 413 Scott, Little Rock	FR 5-6416
Gray, Oscar, Jr., U. S. Navy	
Grayson, Wm. B., VA Hospital, North Little Rock	FR 4-4371
Gregory, Lloyd F., 3010 Kellogg Bldg., No. L. R.	SK 3-6914
Greutter, John E., Donaghey Bldg., Little Rock	FR 2-6139
Growdon, James H., Medical Center, Little Rock	MO 6-9461
Hall, Alastair D., 306 Chester, Little Rock	FR 6-2348
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Hardeman, Daniel R., 1014 W. 3rd, Little Rock	FR 2-4684
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Harrell, J. A., Jr., 4601 Woodlawn at Beech, Little Rock	
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Headstream, James W., Waldon Bldg., Little Rock	FR 5-0264
Henker, Fred O. III, VA Hospital, No. Little Rock	FR 4-4371
Henry, Charles R., Donaghey Bldg., Little Rock	FR 2-5841
Henry, John Forrest, Jr., Meers Bldg., Little Rock	FR 2-0951
Henry, Robert L., Jr., 810 W. 2nd, Little Rock	FR 5-6449
Herron, John T., State Health Dept., Little Rock	FR 4-6361
Hester, Keith, Baptist Hospital, Little Rock	FR 4-3351
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Higgins, Homer A., Winter Park, Florida	4-4444
Hill, Harlin H., 1120 Marshall, Little Rock	FR 2-7032
Hipp, Harold, 300 E. Roosevelt, Little Rock	FR 4-3331
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Hollis, N. T., Waldon Bldg., Little Rock	FR 4-4161
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Honeycutt, Thomas D., 509 Cross, Little Rock	FR 6-1116
Hoover, Paul W., 1120 Marshall, Little Rock	FR 4-0789
Howard, John G., Jr., 501 Woodlane, Little Rock	FR 5-9526
Hundley, John M., 412 Cross, Little Rock	FR 5-5338
Hyatt, David T., Donaghey Bldg., Little Rock	FR 2-7741
Ish, G. W. S., Sr., Century Bldg., Little Rock	FR 2-7025
Jackson, Morris A., 616½ W. 9th, Little Rock	
Jernigan, James P., U. S. Air Force	
Johnson, A. L., 31 Sunnydale, Little Rock	LO 5-3041
Johnson, Glenn H., Donaghey Bldg., Little Rock	FR 2-0708
Johnson, J. A., 105½ W. Main, Jacksonville	LI 4-2125
Johnston, Thomas G., 1425 W. 7th, Little Rock	FR 2-1160
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Millwee, Fay B., McCrory	3524
Morris, John W., McCrory	2524

LIFE MEMBER OF DISBANDED PRAIRIE COUNTY MEDICAL SOCIETY

Gilliam, James C., Des Arc
**Deceased*

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